AD-A237 887

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION N/A	1b. RESTRICTIVE MARKINGS N/A
2a. SECURITY CLASSIFICATION AUTHORITY N/A	3. DISTRIBUTION/AVAILABILITY OF REPORT UNCLASSIFIED/UNLIMITED
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE N/A	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION U.S. ARMY HEALTH SERVICES COMMAND 6b. OFFICE SYMBOL (If applicable) HSCS-M	7a. NAME OF MONITORING ORGANIZATION U.S. ARMY-BAYLOR UNIVERSITY GRADUATE PROGRAM IN HEALTH CARE ADMIN.
6c. ADDRESS (City, State, and ZIP Code) U.S. Army Health Services Command Fort Sam Houston, TX 78234-6000	7b. ADDRESS (City, State, and ZIP Code) AHS SAN ANTONIO, TEXAS 78234-6100
8a. NAME OF FUNDING/SPONSORING ORGANIZATION 8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (City, State, and ZIP Code)	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)
COMPARATIVE WORKLOAD PREDICTION MODELS FOR THE MEDICAL CARE COMPOSITE UNIT AND THE MEDICAL WORK UNIT SYSTEMS FOR HEALTH SERVICES COMMAND

12. PERSONAL AUTHOR(S)
GUNNELL, VAUN, FISHER

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
FINAL	FROM 7-89 TO 7-90	90/06/13	217

16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	DIAGNOSIS RELATED GROUPS (DRGs), PRODUCTIVITY, HIERARCHAL REGRESSION ANALYSIS

19. ABSTRACT (Continue on reverse if necessary and identify by block number)
SEE REVERSE

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT ☐ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION N/A
22a. NAME OF RESPONSIBLE INDIVIDUAL VAUN F. GUNNELL	22b. TELEPHONE (Include Area Code) (801) 392-3343 22c. OFFICE SYMBOL HSCS-M

DD Form 1473, JUN 86 — Previous editions are obsolete. — SECURITY CLASSIFICATION OF THIS PAGE

19. Abstract:

This study examines the issue of whether U.S. Army Health Services Command (HSC) medical treatment facilities altered their Fiscal Year 1989 workload in response to the partial implementation of the new Diagnosis Related Group (DRG) based resourcing system. This Congressionally mandated change for the military health care system has positive and negative aspects. This paper presents both sides of the issue, as well as an historical overview of DRGs. Definitions of terminology relating to the system and detail concerning the functioning of DRG based resource allocation provide an understanding of the statistical analysis which follows.

This project examines variances and relationships in workload reporting for HSC and for individual facilities between FY88 and FY89 through statistical techniques. There were no statistically significant reporting changes across the Command. The study addresses reasons why facilities apparently have not found it in their interest to alter their workload.

In addition, this research evaluates the impact of independent variables which measure resourcing and demography at each of the HSC medical treatment facilities on HSC workload, as counted in both medical care composite units (MCCUs) and medical work units (MWUs). After assessing the impact of these variables through regression analysis, this paper presents a model to predict both MWU and MCCU workload values given the influence of the demographic and resourcing variables. HSC's leaders will find this effort useful in further studies and in encouraging increased efficiency at each HSC facility while considering the performance of the traditional and less intense military unique health care missions.

DEPARTMENT OF THE ARMY

HEADQUARTERS, UNITED STATES ARMY HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234-6000

REPLY TO
ATTENTION OF:

HSCS-M (340B) 8 June, 1990

8 Jun 90

MEMORANDUM THRU Deputy Chief of Staff, HQ, U.S. Army Health Services Command, Fort Sam Houston, TX 78234-6000

FOR Residency Committee, U.S. Army-Baylor University Graduate Program in Health Care Administration, ATTN: (HSHA-IHC), Academy of Health Sciences, U.S. Army, Fort Sam Houston, TX 78234-6100

SUBJECT: Graduate Management Project Submission

In accordance with the instructions contained in the Administrative Residency Manual, I submit my Graduate Management Project (See enclosure).

Encl

VAUN F. GUNNELL
CPT, MS
Administrative Resident

COMPARATIVE WORKLOAD PREDICTION MODELS
FOR THE MEDICAL CARE COMPOSITE UNIT AND
THE MEDICAL WORK UNIT SYSTEMS FOR
HEALTH SERVICES COMMAND

A Graduate Management Project

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Health Administration

by

Captain Vaun F. Gunnell, MS

June 1990

TABLE OF CONTENTS

Abstract

This study examines the issue of whether U.S. Army Health Services Command (HSC) medical treatment facilities altered their Fiscal Year 1989 workload in response to the partial implementation of the new Diagnosis Related Group (DRG) based resourcing system. (Definitions for all acronyms in the paper are at Appendix A.) This Congressionally mandated change for the military health care system has positive and negative aspects. This paper presents both sides of the issue, as well as an historical overview of DRGs. Definitions of terminology relating to the system and detail concerning the functioning c . DRG based resource allocation provide an understanding of the statistical analysis which follows.

This project examines variances and relationships in workload reporting for HSC and for individual facilities between FY88 and FY89 through statistical techniques. There were no statistically significant reporting changes across the Command. The study addresses reasons why facilities apparently have not found it in their interest to alter their workload.

In addition, this research evaluates the impact of independent variables which measure resourcing and

demography at each of the HSC medical treatment facilities on HSC workload, as counted in both medical care composite units (MCCUs) and medical work units (MWUs). After assessing the impact of these variables through regression analysis, this paper presents a model to predict both MWU and MCCU workload values given the influence of the demographic and resourcing variables. HSC's leaders will find this effort useful in further studies and in encouraging increased efficiency at each HSC facility while considering the performance of the traditional and less intense military unique health care missions.

ACKNOWLEDGMENTS

Many individuals have been very helpful in my efforts to complete this project. My academic advisor, LTC Loader, and several individuals from U.S. Army Health Services Command's Health Care Studies and Clinical Investigations Agency, to include COL Hilliard, COL McFarling, COL Meyer, and LTC (RET) Callaghan guided me in the formulation of my project proposal. MAJ Adams and his support staff in the Medical Expense and Performance Reporting System Branch and Mr. Drewry of the Health Care Management Engineering Activity all helped in the data collection phase.

Dr. Finstuen of the Army-Baylor faculty assisted me with the statistical and modeling phases of the project. MAJ Olsen of the current Baylor class provided valuable suggestions concerning the research design. LTC(P) Stevens, my preceptor, provided not only excellent critique of the proposal and the project, but also moral support throughout. Finally, my wife Margaret provided her loyalty and selfless support throughout the project, to include editing the effort. My heartfelt thanks to all.

Introduction

Conditions Which Prompted the Study

The Defense Appropriations Act of 1987 and 1988, Title 10, Chapter 55, US Code, Section 1101 specifies that the primary criterion for allocation of resources to military treatment facilities will be Diagnosis Related Groups (DRGs). Because Congress mandated this change, the three services must implement a DRG based resourcing system regardless of their own preferences (McFarling, 1988).

The Medical Care Composite Unit (MCCU) has been the traditional and sometimes controversial measure of workload within HSC. Critics consider the MCCU system inaccurate and inappropriate because it does not reflect workload intensity or type. The MCCU formula creates an incentive which rewards inpatient days and increased length of stay, neither of which is necessarily an appropriate nor efficient indication of a medical treatment facility's (MTF) workload. By resourcing facilities in this manner, the MCCU ignores the variations in workload intensity between facilities. These critics contend that under the MCCU system any facility could demonstrate a need for an increase in funds, even if an increase were unwarranted. Their conclusion is that the old system rewards inefficiency or the practice of conservative medicine (longer lengths of stay) which opens the door to unjustified budget increases (Rickard et al, 1988).

Efforts by HSC to replace traditional systems with DRG resourcing provide many challenges. A huge problem is that none of the services' extant financial and manpower systems are capable of providing the level of detail necessary to facilitate DRG cost analysis. In order to respond appropriately to the productivity incentives inherent within a DRG allocation model, an MTF commander must be able to manage the cost per patient case within a DRG. Currently none of the existing systems comes close to the sophistication needed to effectively manage a DRG based resourcing system in the military services (A Report to Congress, 1987).

On a positive note, full DRG implementation would result in a patient specific cost accounting system that will make DOD comparable, for the first time ever, to civilian hospital inpatient systems. Comparability would allow an evaluation of whether the military can provide health care more efficiently or cheaply. However, comparisons would still be limited because real differences exist between the mission requirements and population demographics of military and civilian facilities. Such differences are also found between military facilities which differ by type, size, and the mission of their respective installations. Comparisons between facilities in "peer groups", or facilities of similar type, size, and mission will produce the most meaningful results.

A major advantage of the DRG based resource allocation system is that the DRG weights vary depending on the resource requirements for the care of different types of illness. Hospitals that take care of sicker patients will receive additional funds while those that provide less intensive care may expect to lose some resources. Thus, in terms of resource intensity, the DRG system seems much fairer than the old (MCCU) system in terms of awarding workload credit (McFarling, 1988).

Adopting a DRG system to military medicine poses significant challenges. Within U.S. Army Health Services Command the sickest patients are often retirees and their dependents. With insight into the marginal incentives of specific DRGs, managers would be led to treat retirees and ignore active duty (our primary mission) and their dependents. Funding shifts would also occur in the direction of medical centers where specialty staffing means sicker patients will be seen than at the military community hospitals or medical activities.

The new system does not take into consideration military mission requirements for the Army, Navy, and Air Force. The portion of hospital resources consumed by readiness related activities is largely speculative and, depending on how one wants to define readiness, could range from a very small portion of direct care funds to all funds spent in the direct care system. Each medical department does respond differently to its service specific mission requirements for mobilization and readiness. As a result a different mix of military and civilian staff develops (A Report to Congress, 1987).

Yet another unique aspect of the military health service system is the budgeting and appropriation process. Within this process are several constraints which may limit the potential effectiveness of a DRG based system. For instance, several appropriations or categories of funding provide resources to HSC facilities. Program managers other than the service medical departments control many of these categories, (such as military salaries and military construction). Funds may not be spent for other than the purpose for which they were appropriated. For example, hospitals may not use military salary funds to purchase equipment or to hire civilian personnel nor may they use "procurement" funds to contract for commercial services. Hospital commanders lack the flexibility to shift resources among appropriations to reduce costs or improve the quality of care. Since commanders manage only operations and maintenance appropriations, substantial resources remain outside their control (A Report to Congress, 1987).

Other differences between the military and civilian systems pose more challenges for adopting DRGs for the military system. Under a prospective payment system civilian hospitals can improve their profitability by taking specific management actions to reduce the costs associated with care in a particular DRG and keep the difference as profit. In an open, competitive reimbursement system, the savings of one hospital are not directly tied to the losses of another hospital. Historically, in a closed budget system such as the military, an increase in funds for one hospital has been offset by a decrement to another (A Report to Congress, 1987). Although HSC leaders make decrements based on rational, workload related criteria, the fact remains that the Command must continue to operate with a limited amount of resources.

In summary, the use of DRGs could offer DOD a variety of management benefits, such as the ability to evaluate provider and management practices using length of stay and cost per case data. Yet, the real benefit of a prospective DRG system in military hospitals should lie in the ability of the facility commander to control and manage individual patient costs while responding to incentives for efficiency and quality care. To take advantage of these incentives, implementation for the military services will have to include improved definitions of medical readiness and peace-time resources, increased management flexibility within the appropriations process, movement towards a patient level cost accounting system, and a recognition of the differences between the civilian and military environments which limit full application of a DRG prospective reimbursement model (A Report to Congress, 1987).

Statement of the Management Problem

This study addresses the issue of whether facilities are beginning to alter their workload reporting procedures or perhaps the manner in which they deliver care. Such alterations may be indicative of facility efforts to obtain more favorable resourcing levels under the new, partially implemented DRG based resourcing system. This paper also discusses which demographic or resourcing factors are the best predictors of the new DRG Medical Work Unit (MWU) and whether predicted values can be developed into a useful management tool for evaluating the performance of facilities throughout HSC.

The objectives of this paper are to develop a model which will allow U.S. Army Health Services Command to determine whether facilities are departing from their historical behavior in doing their missions, and to determine whether facilities are using their resources efficiently in relation to all other HSC hospitals. This report considers operating parameters for HSC treatment facilities as well as recommendations to avoid penalizing facilities for performing their historical missions.

Review of the Literature

Health Services Strategic Plans

The 1989 HSC Strategic Plan provides the basis for the direction of this study. The Plan contains three strategic vision components--readiness, sustainment, and modernization. Within the sustainment component are specific goals. The first is to fully define and interrelate the components of the peacetime mission of HSC. The second is to develop and implement a system that will objectively identify the capability of each subordinate unit to perform each component of the peacetime mission. The third is to develop and implement a methodology to measure work (performed, not performed, or potentially performed), to better justify, acquire, and appropriately manage resources (Major, 1989).

With these goals in mind, the Army Medical Department needs to learn how to best deal with the implementation of Fiscal Year 1989 Diagnosis Related

Group Based Resource Allocation Guidance. The issues being confronted are not new and indeed not limited to the military medical departments. The issue of defining a hospital's product is difficult. Hospital costs vary depending on the number of patients treated and the complexity and intensity or acuity of their medical requirements. Complexity and intensity are key elements in the utilization of case mix as an indicator of the scope of services per average patient. Complexity relates to the types of services performed; intensity to the number of services performed per patient day or hospital stay. The concept of case mix is important because two hospitals discharging the same number of patients may have significantly different costs due to different case mixes (Hartzke, 1983).

Industrial giants must know how efficiently they can transform inputs into outputs. Their ability to define these costs determines whether they remain solvent in highly competitive times. Hospitals and service organizations have traditionally had difficulty defining their outputs or products, and have been unable to accurately determine the cost of converting inputs to outputs.

Civilian hospitals have survived anyway because their reimbursements have historically been cost based. Government facilities, having been funded on previous performance, have had few reimbursement worries. The government began to worry about the cost of health care during the 80s, however (Hartzke, 1983).

As a result of increased scrutiny by the government and third party payers, the need to define a hospital's product is more important than ever. Historically, the major function of a hospital is to provide the diagnostic and therapeutic services required by physicians in the clinical management of their patients (Hartzke, 1983). The American hospital of the late 1980s offers a richer and more complex mix of clinical and human services than it did in 1980. During the 1980s, hospitals moved aggressively to capture emerging markets and succeeded in carving out major positions in ambulatory surgery, diagnostics, and home care (Goldsmith, 1988).

With the advent of DRGs and in the face of the ever increasing complexity of services offered by hospitals, DRGs represents a significant effort at defining a hospital's product. It is the bundle of services used in the treatment of a patient with a specific DRG designation (Womack and Fleming, 1986). DRGs are now the generally accepted definition of hospital products available.

The determination of the appropriate mix of services or outputs necessary to treat patients would provide managers with the tools to determine their hospital's cost effectiveness and productivity. Indeed, competition arises from this product definition and the ability to identify the categories of patients a hospital can treat at a profit. Although hospitals will continue to treat all categories of patients, management's natural inclination is to allocate resources to the most profitable services. Internal competition increases if hospitals organize by product lines. Each service or product manager must develop an aggressive marketing campaign to survive the internal and external marketplace. Management, and in the case of the military, the Department of Defense, should insure that these individual marketing initiatives do not subvert the overall organizational goals of quality and service (Womack and Fleming, 1986).

Alternative Classification Systems

Through the years several classification systems, including DRGs, have been developed to measure hospital workload. They include:

1. The International Classification of Disease, Ninth Revision, Clinical Modification (ICD9-CM), is a classification of diseases, injuries, impairments, symptoms, and causes of death. American hospitals use this system widely. The primary purpose of this system is to classify morbidity and mortality information for statistical and quality assurance purposes. Yale researchers used this system to classify patient data into DRGs (Hartzke, 1983).

2. The primary objective of the Commission on Professional and Hospital Activities (CPHA) List A was to group diagnoses that had similar length of stay patterns to review and evaluate actual patterns of care. This was one of the earliest attempts to categorize patients using diagnostic information contained in the Professional Activity Study (PAS). This system included a total of 7,960 categories, making it slightly less complex than the ICD9-CM

system (Hartzke, 1983). This system is much too complex to use on a regular basis.

3. The Disease Staging process places patients into one of four stages representing the physiologic progression of diseases using data from patient records or discharge abstracts. Stage I patients have no complications (minimal severity); Stage II patients have problems with only one organ system and have a high risk of complication; Stage III patients have multiple site involvement and poor prognosis; and Stage IV or end-stage conditions are terminal (Hartzke, 1983). This system helps relate hospital resource use to prognosis.

4. The condition of the patient at admission rather than the patient's final diagnosis forms the basis for the Patient Management Categories case mix measurement. The developers of this system did not use the discharge diagnosis because the treatment of patients with the same diagnosis may involve different diagnostic and therapeutic procedures. The underlying principle is that physicians treat patients according to their symptoms at the time of admission, not after diagnosis. After extensive physician consultation and panel review

this system provides a Patient Management Path (Hartzke, 1983).

5. The Patient Severity Index classifies patients according to the severity of their illness. A number of scales and an overall severity index classify patients into four levels. This index is not freestanding, but more explicitly refines other case mix measures (Hartzke, 1983).

6. The primary purpose of Diagnosis Related Groups was to relate the demographic, diagnostic, and therapeutic characteristics of patients to treatment provided. For example, only those variables related to the condition of the patient (e.g., age, primary diagnosis), and the treatment process (e.g., operation) that affect the utilization of the hospital's facilities differentiate cases (Hartzke, 1983).

As expected with such a variety of systems, there is no "best" measure of hospital workload. Each system has strengths and weaknesses, and attempts to describe, in differing ways, how a hospital uses resources to provide services to patients. DRGs gained the most notoriety due to their ability to describe the resources used, on average, in the treatment of a specific group of patients, and because the Health Care Financing Administration (HCFA) commissioned much of the initial DRG research as an improved hospital system (Womack and Fleming, 1986).

DRG Development

Researchers at the Yale University Center for Health Studies developed the concept of DRGs in the late 1960s. Their objective was to develop a classification system which would improve the hospital's capability to manage its resources. Managers could then use this system to enhance their utilization review capabilities for patients with extremely long or short lengths of stay. The Yale group developed the first documented DRGs--a total of 33--in 1973. In 1975 HCFA began working with Yale to help in the development and further revisions of this classification system. HCFA's early effort, which consisted of 383 DRGs, received much criticism due to patient classification irregularities. In 1983, the fifth and final revision resulted in the classification scheme that exists today. Though initially designed solely as a management tool, HCFA's involvement in the development of a viable patient classification system led to the incorporation of a prospective payment or pricing system into DRGs (Hartzke, 1983).

The Yale researchers developed Diagnosis Related Groups in accordance with the three following principles (Burik, 1981):

1. Major diagnostic categories must have consistency in terms of their anatomical and physiopathological classification.

2. Major diagnostic categories must have a sufficient number of patients in order to produce statistically meaningful patient populations in each category.

3. Major diagnostic categories must cover the complete range of ICD9-CM codes, without overlap.

With these principles in mind, they developed 23 Major Diagnostic Categories (MDCs). The Yale researchers classified patient records within each MDC using lengths of stay. An interactive computer system allowed the research team to classify patients into medically meaningful groups. The Yale group used the following six patient attributes to assist in the classification process (Grimaldi, 1983).

1. Operating room procedure
2. Principle diagnosis
3. Age of patient at admission
4. Sex of patient
5. Complication or comorbidity
6. Secondary diagnoses

Finally, researchers selected the following technical characteristics to determine the final DRG classification:

1. Each group must be interpretable medically and represent homogeneous diagnostic categories. Physicians should be able to relate each patient in a specific DRG with a particular patient management process.

2. Individual group definitions should rely on variables that are available in medical records and are relevant to output utilization. These variables also should relate to each patient's condition or treatment process.

3. The groups must be manageable in number, mutually exclusive, and exhaustive.

4. Resource utilization per patient for each group should be similar.

5. Group definitions must be comparable across different coding schemes.

6. The groups must be of a sufficient size to permit comparative analysis between hospitals, and represent the entire range of patients (Hartzke, 1983).

The combination of grouping principles, the computer system, patient attributes, and technical characteristics led to the formation of 467 DRGs. Each DRG was clinically coherent and distinct with respect to both length of stay and cost (Hartzke, 1983).

While DRGs may be an improvement over previous methods, both advantages and disadvantages exist in the system. The advantages include:

1. Diagnosis related groups are a marked improvement over traditional methods in the identification of resource consumption in terms of patient similarities and differences. Also, the system base is the patient diagnoses and it considers secondary diagnoses, surgical procedures, and comorbidities (Hartzke, 1983).

2. Discharge abstract data determine a patient's DRG.

3. The number of DRGs is manageable.

4. Diagnosis related groups are now familiar to many people in hospitals across the country, and in healthcare related fields.

5. The DRG system will promote hospital efficiency by providing incentives for improved communications between staff members. Heretofore, a hospital's administrative concerns and the physician's management of patient care were on essentially two different tracks. Now these must merge into one comprehensive system of management. For example, hospital administrators traditionally involved in nonpatient care concerns must now ensure that the hospital has adequate cost reporting and peer review systems that depict patterns of utilization and their related costs for each physician. Likewise, physicians will have to pay closer attention to the dollar consequences of practice patterns (Balinsky and Starkman, 1987).

The following disadvantages also apply:

1. Diagnosis related groups rely heavily on the patient's medical record. The 1981 database used to create the original DRGs and weights contained many errors. A study using 1985 data indicated that there

were still substantial errors in the selection of the principal diagnosis and other coding activities that affect DRG assignment. Coding practices were not uniform across civilian hospitals during the early years of prospective payment reimbursement (Steinwald and Dummit, 1989).

2. Diagnosis related groups do not account for the severity of illness or psychological factors which may extend a patient's length of stay (Steinwald and Dummit, 1989).

3. The DRG system fails to address undiagnosed cases which will result in a low estimate of hospital resource use (Steinwald and Dummit, 1989).

The implementation of DRGs is nothing new to the federal sector. The Veterans Administration began their DRG implementation process in 1983. By 1986-1987 the system had become very unpopular in the VA (Jemison, 1988). Many hospital administrators felt that the system protected certain "flagship" hospitals, and did not help other less favored facilities (Nightingale, 1988). Even at Audie L. Murphy Memorial Hospital in San Antonio, Texas--one of the big "winners" in terms of DRG resourcing--DRGs were unpopular. Mr. Coronado, CEO at Audie

Murphy, and his staff feel that even though the DRG system shows their facility to be very efficient, they never see anything in the way of additional funding for their facility. Extra minuses always more than negate efficiency increases (Coronado, personal communication, 26 September 1989). The Department of Defense should consider carefully that the intensity and unpopularity of the VA experience caused the Administration to discontinue their DRG based resourcing system during FY90.

The Defense Appropriations Act of 1987-88 and the official implementing letter dated 5 August, 1988, (Subject: Fiscal Year 1989 Diagnosis Related Groups Based Resource Allocation Guidance) has brought the reality of the system to military medical treatment facilities. LTC (RET) John Coventry provided some interesting insights into the work performed by the Tri-Service Performance Measurement Work Group in adapting DRGs to the military system. He indicated that DRGs have categorized inpatient care into about 475 categories which are (in theory) homogeneous in terms of both length of patient stay and resource consumption. National DRG implementation efforts have only been partially successful, in part because DRGs are not nearly as homogeneous as they should be (McFarling, 1988).

The intent for DOD was nonetheless, to develop a system compatible with the civilian system. The ability to compare military facilities to Medicare, VA, CHAMPUS, other uniformed services hospitals, and other payer groups is critical in terms of justifying resourcing needs to Congress. These comparisons are critical, given the organizational differences and unique missions, such as medical boards and wartime readiness, faced by military facilities (McFarling, 1988).

Because of the necessity for comparisons, government officials cannot ignore the differences between military and civilian hospitals. The wartime readiness mission can be in direct conflict with peacetime health care considerations, and the costs associated with readiness are often variable and hard to define. Each military facility may have to respond differently to its unique service-specific mission requirements for mobilization and readiness. Army physicians sometimes deploy to Central America, and Navy physicians go to sea. These various factors can result in a very different mix of military and civilian staff members at specific facilities. DOD officials must address variability in the readiness posture for this resource allocation system to achieve credibility and uniformity across the military healthcare system (Womack and Fleming, 1988).

Currently, the government allocates supply dollars in part on workload, but more realistically on historical allocations. Because of the work done in the military on Medical Expense and Performance Reporting System (MEPRS) related Workload Management System for Nursing, it is now possible to accurately reflect variations in acuity. At some point, the implementation of DRG based resourcing may lead to the development of a patient-based, cost accounting system. This would lead to a much improved methodology of allocation of supply dollars. To respond appropriately to the productivity incentives inherent within a DRG allocation model, the commander must be able to manage costs on a per-patient basis. Facilities or even individual departments or services could then optimize their resourcing levels by marketing the most profitable DRG categories while taking care not to compromise organizational goals such as quality and service. However, moving to such a cost accounting system will require a much higher degree of sophistication than currently exists at the MTF level (McFarling, 1988).

Defense officials must also consider basic mission differences between the civilian sector and the military system. In the civilian sector, HCFA's primary goal is cost containment, since they are a third party payer only. The HCFA does consider the quality of care issue as well. As a general rule, hospitals must have JCAHO accreditation to receive Medicare reimbursements. On the other hand, the military system must focus on the equitable allocation of resources in a multi-hospital system, not necessarily cost reductions. While this focus may ultimately change, depending on the whims of Congress, cost savings may not be the initial result (McFarling, 1988).

The initial DOD working group had the objective of showing how to count inpatient workload and considered several options to accomplish that objective. One option was to do a full fledged study of patient level cost accounting in DOD. However, no cost accounting system exists in DOD that will allow a patient level study to be done. The Medical Expense Performance Reporting System seems to promise such a system, but is far from complete implementation. This option, which included the development of a patient-based cost accounting system from scratch, would have been very lengthy and arduous (McFarling, 1988).

The second option was to look at various sets of weights that had already been developed across the nation for the VA, CHAMPUS, New Jersey, and Maryland, to name a few. After careful analysis, the working group determined that all sets of rates were highly correlated with each other at the medical treatment facility level when it came to supply costs. That finding appeared logically sound, since all sets were trying to measure the same thing. The working group determined, based on statistical analysis, that CHAMPUS weights explained a significant portion of the variability in resources consumed per diagnosis. Therefore, the group recommended and DOD selected the CHAMPUS weights for use during the implementation of DRG based resourcing in uniformed services facilities.

The Defense Department plans to develop military unique weights in the future (McFarling, 1988).

In addition, at some point all CHAMPUS budgets may come under the control of military MTF commanders. If and when this occurs, the use of CHAMPUS weights would allow commanders to make more informed decisions by comparing the economics of caring for patient groups in-house or in civilian hospitals (Hartzke, 1983).

Resource Allocation Using DRGs

One of the primary reasons a DRG based resource allocation system is a significant improvement over the MCCU system is that the weights assigned to each DRG vary depending on the amount of resources required to provide care to patients with a variety of illnesses. A hospital treating sicker categories of patients should receive more resources than a similar-sized hospital which treats less ill patients. The use of these weights to allocate resources, however, increases the complexity of determining how much money a hospital within a peer group should receive for the care it renders to patients (McFarling, 1988).

Some definitions are important to understanding the resource allocation system. These definitions are:

a. Relative Weighted Products (RWPs) are dispositions from the biometrics system weighted by the CHAMPUS cost weights. The system assigns each disposition from the services' biometrics systems to a DRG and weights dispositions by the appropriate CHAMPUS weight for that DRG. The sum of weighted dispositions for an MTF is the total RWPs for each service (Optenberg, 1988).

b. Next, is the term Case Mix Index (CMI). The CMI is the total RWPs for an MTF divided by the total of RWP related biometrics dispositions. The CMI gives the number of RWPs generated by the average disposition from the MTF (Optenberg, 1988).

c. An adjustment to the CMI produces a Relative Case Mix Index (RCMI). The hospital's CMI divided by the average military health service system case mix index equals the RCMI. This calculation is significant because managers can use the RCMI to compare a given hospital with all other hospitals within the system. The comparison is not valid, however, for civilian hospitals, since nonmilitary hospitals use different weights (LTC Callaghan, personal communication, 1989).

d. Next is the Inpatient Work Unit (IWU). Total IWUs for an MTF equal the MTF's total Medical Expense and Performance Reporting System (MEPRS) dispositions multiplied by its RCMI. Although there is often a discrepancy between biometrics and MEPRS dispositions, MEPRS is the official volume count. One key assumption in this counting process is that dispositions counted in MEPRS but not available through biometrics for DRG assignment follow the same case mix distribution as those dispositions assigned a DRG (Optenberg, 1988).

e. A newcomer to the system is the Ambulatory Work Unit (AWU). These AWUs are the sum of clinic visits weighted by relative cost weights across 64 MEPRS three-digit ambulatory accounts. Weights for AWUs are standardized to the average DOD cost per disposition. Thus, total AWUs are the inpatient dispositions equivalent for the ambulatory workload. For example, based on the particular medical specialty clinics involved, 500,000 clinic visits may equate for workload credit to 13,000 average dispositions (Optenberg, 1988).

f. Finally, in terms of definitions, the sum of IWUs and AWUs is the Medical Work Unit (MWU). Since the average DOD-wide cost per disposition is the basis for both the IWU and the AWU, the sum of the two forms a single composite measure of output for cost and productivity analyses or resource allocation within peer groups of similar facilities (Optenberg, 1988).

Purpose of the Study

The purpose of this study is to analyze workload (as measured in both MWUs and MCCUs) generated by the medical treatment facilities within U.S. Army Health Services Command. This research examines variances and relationships in workload reporting for HSC and for individual facilities between FY88 and FY89 through statistical techniques. The next step is to measure the impact of independent variables which measure resourcing and demographics on HSC workload as measured by MCCUs and MWUs. Finally the author uses the regression equation to establish predicted workload values for each of the HSC facilities, and assess actual FY89 workload against the predicted values. The ultimate goal or purpose of the study is to furnish HSC leaders a model which will be useful in encouraging efficiency throughout our hospital system. The general approach includes:

(a) The identification of statistically significant variances between MWUs and MCCUs for FY88 (workload before the implementation of DRG resourcing) and MWUs and MCCUs for FY89 (workload measured after the implementation of DRG resourcing within HSC). The research observes and evaluates the strength of the statistical relationships between these variables to determine whether HSC facilities altered their workload reporting.

(b) The assessment of the effect of demographic and resourcing variables upon Command workload as measured in both MWUs and MCCUs. The strength of demographic and resourcing variables in predicting workload reported under the two systems is key to understanding the next step--predicting the levels of workload which should be accomplished given the demography and resources at each facility.

(c) The development of a predicted MWU and MCCU value for each medical treatment facility within the Command for FY89. By comparing predicted workload values with the actual workload accomplished, this research effort provides an indication of how facilities are performing given their current levels of resourcing. From this vantage point HSC leaders may determine the usefulness of the model in assessing the performance of various facilities.

Methods and Procedures

Operating Definitions

Operating definitions for the variables used in this study are as follows:

Medical Work Units (MWUs) = Inpatient work units (IWUs) + Ambulatory work units (AWUs).

Medical Care Composite Units (MCCUs) = The average beds occupied at a facility, plus the average daily number of admissions x 10, plus the average daily number of live births x 10, plus the average daily clinic visit count x .3. The MCCU system is the traditional workload accounting system for HSC.

Physician hours (PHYHRS) = The number of productive physician hours available for patient care as reported by individual facilities on their Medical Expense and Performance Reports (MEPRS). This category includes all house physicians, interns, residents, and fellows with admitting privileges.

Direct Care Professional hours (DCPHRS) = The number of direct care provider productive hours available for patient care as reported by the facilities on their MEPRS reports. This category includes all clinicians who provide hands-on patient care but who do not have admitting privileges.

Examples would be optometrists, podiatrists, nurse practitioners, and nurse midwives.

Nursing hours (RNHRS) = The total nursing hours available for patient care as reported by facilities on their MEPRS reports. Nurses included in this category are all those not included in the direct care professional category.

Direct care paraprofessionals (PARAHRS) = The number of MEPRS reported hours available for patient care by individuals skilled to provide assistance in direct patient care. Those in this category include medical corpsmen, civilian licensed practical nurses, and individuals of comparable grade and training.

Operating beds (OPERBEDS) = The number of beds reported by each facility as being staffed and operational.

Active duty beneficiaries (AD) = The number of eligible active duty beneficiaries who reside within the catchment area of a medical treatment facility.

Dependents of active duty (DEP) = The number of eligible dependents of active duty military who reside within the catchment area of a medical treatment facility.

Other beneficiaries (OTHBEN) = All other individuals who are eligible for care at and reside within the catchment area of a medical treatment facility. This group includes retirees, dependents of the retired, and survivors.

Medical centers (CENS) = Military medical treatment facilities which provide tertiary care, are teaching facilities, and have a regional mission to act as referral centers for other military facilities. See Appendix B for a complete listing of all HSC medical treatment facilities.

Large Medical Activities (Large) = Army community hospitals with 150 or more beds. (Appendix B)

Medium Medical Activities (MED) = Army community hospitals with more than 50 but less than 150 beds (Appendix B).

Small Medical Activities (SMALL) = Army community hospitals with 50 or less beds. (Appendix B)

QTR1, QTR2, QTR3, and QTR4 = The first, second, third, and fourth quarters of fiscal year (FY) 1989.

<u>Dependent and Independent Variables</u>

Two of the variables defined above are dependent during this study--MWUs and MCCUs. These variables both measure the workload performed by the various medical treatment facilities within HSC. All other variables are independent and measure either the resources or demographic characteristics at the Command's hospitals. This research tests these independent variables to determine whether they predict, with statistical reliability, what workload performance should be.

<u>Conceptual Models</u>

The theoretical framework for the regression models which follow came from Kerlinger's path analysis model (Kerlinger, 1986). Conceptual models depicting the relationships of the variables in this study are at Appendices C, D, and E. The first model depicts a hypothesized relationship between FY89 MWUs and workload measured under the old MCCU accounting system. The Deputy Chief of Staff for Resource Management (DCSRM) at HSC provided data for FY88 computed using the new MWU system as if it had been in effect during FY88 even though it was not until FY89 (Appendix F). The second and third models

(Appendices D and E) depict the concept that resource and demographic variables, such as the number of clinician hours available and the number of patients who might need to be seen, may and, in fact, should influence workload, as measured in either MWUs or MCCUs.

These models suggest that each of the independent variable categories has a combined effect in predicting workload levels. No single predictor variable alone determines performance. Thus, researchers must consider elements from each of the categories when developing a workload prediction model. The models also reflect that the study will test the same predictors for their impact on both MCCUs and MWUs.

Statement of Hypotheses

The hypotheses tested by this study are:

1. Workload, as measured in MCCUs, is a function of the year of workload performance. Stated differently, facilities have begun to alter their MCCU workload because of the partial implementation of DRG based resourcing. See Appendix G for this hypothesis written in equation format. The regression constant (AoU), or y intercept, is the

first variable shown in each equation. The other independent variables come next in relational order.

2. Workload, as measured for FY89 in both MWUs and MCCUs is a function of the resources available to a facility. The resources measured in this study are: physician, direct care provider, nursing, and paraprofessional hours available; the total number of operating beds available; the type of facility--whether it be a MEDCEN, large MEDDAC, medium MEDDAC or small MEDDAC; and time, as measured by the periods of first, second, third, and fourth quarters of Fiscal Year 1989. The written hypotheses for this point are also shown in Appendix G due to their length.

3. Workload, as measured for FY89 in both MWUs and MCCUs is a function of the demographics at each facility. The demographics captured for this study are: the number of active duty, the number of dependents of active duty, and the numbers of other beneficiaries who reside in each catchment area.

<u>Data</u>

The population for this project is all workload performed by HSC facilities. Since DOD officially implemented the DRG based workload measurement system on 1 October 1989, only one year exists where both workload accounting systems were running side by side and were used, in part, to distribute resources to facilities. Although the study evaluates workload performed before 1989, FY89 workload, as well as corresponding resourcing and demographic variables is the central focus of this project. The fact that FY89 is the only year when DOD officially used the two workload systems strengthens the study's research design. This research considers data elements from each of the 37 medical treatment facilities which provide both inpatient and outpatient services. Thus, the research design required no sampling. Rather the study included the entire data set, or the FY89 population.

The Data Collection Instrument

MWU and MCCU data were readily available from the Deputy Chief of Staff for Resource Management at HSC (Appendix F). The DCSRM publishes these figures, as well as the operating beds for each facility, on a quarterly basis in the Command Performance Summary. The author obtained catchment population information from DCSRM. Quarterly updates were available for active duty beneficiaries. The

DCSRM does not update data on dependents and other beneficiaries on a quarterly basis. Rather, Defense Medical Information Systems (DMIS) officials update these groups annually. The study compared FY88 and FY89 data and only minor differences existed in terms of the total dependent and other beneficiary populations reported for the two years. Thus, this study includes only FY89 annual dependent and other beneficiary data.

My source for the physician, direct care provider, nursing, and paraprofessional hours was the Health Care Management Engineering Activity (HCMEA) at HSC. This data comes from the Medical Expense Performance Report generated at each HSC facility. Although DCSRM is the proponent of that report, HCMEA has the ability to manipulate the data base to generate information on a quarterly basis. Even with HCMEA's capabilities, quarterly information for some facilities was missing. In those instances, the author assessed the trend in their available hours, and projected quarterly data for use in the study.

Except as mentioned above, I coded quarterly data for all variables for the study. A complete listing of all data collected for and used in this study in Enable Spreadsheet format is at Appendix H. I changed no variable formats while coding them. For example, I did not convert hours to full-time equivalents, but coded them as hours. The same holds true for catchment area population coding. The spreadsheet included four coding categories for the type of facility. For example, a 1 in the CENS column identifies Walter Reed as an Army Medical Center, and 0's are in the large, medium, and small coding columns for Walter Reed. I repeated the process for each facility. The study contains four coding categories for the quarters of FY89. First quarter data has a 1 in the first quarter column, and 0's in the second, third, and fourth quarter columns. I repeated the process for each of the variables to identify it to the appropriate quarter.

I coded quarterly data to ensure the stability of the research model. If a study contains insufficient data groupings, a danger of overfitting exists. Overfitting occurs when variances in data are averaged or smoothed out. Such a condition would exist if this study included only annual data. By coding quarterly data the population size of the study increased to 148 cases, a much safer range (Finstuen, personal communication, 2 May 1990).

Ethical Rights

The study process respected and protected confidentiality of all information. I secured all study documents and released none to outside third parties. The information used in this study is secondary in nature--I obtained it from official sources and not from individuals. None of the data came from a particular patient or provider and none is traceable to a particular individual. Thus, no threat to any specific individual exists. I provided information about the study only to those assisting in its preparation, all of whom are DA employees.

Validity and Reliability

William Emory states that "The determination of content validity is judgmental and can be approached in several ways. First, the designer may determine the validity through a careful definition of the topic of concern, the items to be scaled, and the scales to be used...A second way to determine content validity is to use a panel of persons to judge how well the instrument meets the standards" (Emory, 1985, p. 95).

This study uses the Emory approach. I first carefully considered the variables of interest and how they could be measured. I next presented my paper to a panel of experts--the Health Care Studies and Clinical Investigations Agency staff. This group developed and adapted the civilian DRG resourcing system for implementation in military facilities. They agreed that my variables were of interest and importance. They also recommended additional variables be considered, such as available hours and operating beds, which I then included in this study.

The reliability of the data used is open for discussion. Many of the variables (available hours and MWUs) are a product of the Medical Expense and Performance Reporting System. The DCSRM personnel indicate that facilities report with varying degrees of accuracy. Nonetheless, DCSRM is the official source of this information, and this data is not only the very best available but also the only data available from official or any other sources at this time. One can assess content validity by noting the relationships of variables as portrayed in a correlation matrix. Correlation matrix results are in the results chapter.

This research noted extraneous variables. Fred Kerlinger defines extraneous independent variables as variables which are not part of the study design but may influence the dependent variables (Kerlinger, 1986). This study's design cannot control the fact that HSC must rely on 37 different facilities to interpret reporting regulations and then generate workload feeder reports. The fact that many AMEDD personnel see no utility for the entire MEPRS system at the individual facility level contributes to inaccuracy in reporting and is uncontrollable.

Research Design

After evaluating the reliability and validity associated with the study, I performed a series of correlation matrices and multiple regression analyses. The study evaluated the relationships between workload reported before DRG resourcing (FY88 data) and workload reported after implementation (FY89 data) for the entire Command. Next, the research effort examined the strength of each of the dependent variables defined earlier to determine their respective strengths as workload predictors.

This project contains separate hierarchal multiple regressions for each set of variables to assess the strength of the interaction between independent variables for each of the dependent variables. Each predictor variable was forced into the model in the order given in Appendix G (available hours, operating beds, catchment population supported, type of facility, and quarter of the year). Next, I used the equations formed during these regression modeling processes to develop predicted scores for each facility within HSC. I then assigned evaluation criteria to allow assessment of the prediction modeling. An expanded explanation of these steps follows in the results section.

Results of Data Analysis

My research tested FY89 MWU data as it compares to FY88 MCCU and MWU workload as well as FY89 MCCU workload. All data input into the Microstat statistical software package are at Appendix H to insure test replication as necessary. A high degree of statistical significance was found between all of these variables. The correlation matrix (Appendix I) provides specific information regarding these relationships. The correlation between all of these variables is very high. My observations are: the FY89 MWU data accounts for 99.5 percent of the variance in FY88 MWU workload data; the FY89 MWU workload explains 97.3 percent of the variance in FY89 MCCU workload; and the FY89 MWU set accounts for 97.4 percent of the variance in FY88 MCCU workload.

The descriptive statistics (Appendix J) support the correlation matrix results. Average quarterly MWUs for the Command actually decreased by 270 between FY88 and FY89. Average daily MCCUs also decreased slightly over the period. Stated simply, there is no statistical evidence that facilities throughout the Command are altering their workload reports to obtain a higher workload count under the MWU system.

Observation of individual facilities showed the same to be true at that level. For example, although the hospital at Ft. Carson reported an increase in MWUs of 13 percent between FY88 and FY89, that facility also reported a 16 percent increase in MCCU workload. No findings indicate that individual facilities are shifting workload to higher weighted DRG categories to alter their MWU workload disproportionately. Thus, the null hypothesis is substantiated for the first model of this study--there is no statistical difference in workload reported before and after the implementation of the MWU system.

Next the study provides results of the hierarchal regression model. Quarterly input for the hierarchal model is in Appendix K. The correlation matrix (Appendix L) indicates that statistically significant relationships exist between the independent and dependent variables. The best predictors of workload in order of significance are:

MWU PREDICTORS	r	MCCU PREDICTORS	r
PARAHRS	.978	PARAHRS	.971
PHYHRS	.970	RNHRS	.946
RNHRS	.966	PHYHRS	.938
OPERBEDS	.965	DCPHRS	.868
DCPHRS	.920	OPERBEDS	.928
CENS	.790	CENS	.767
DEP	.663	DEP	.732
AD	.634	AD	.706
OTHBEN	.438	OTHBEN	.445

The quarter of the year and large facility variables show no statistical significance. The correlation matrix portrays a negative relationship for the medium and small facility variables.

The correlation matrix results reveal that the MCCU reporting system is more sensitive or seems to give relatively more credit to nursing hours than does the MWU system. These results also show direct care provider hours and operating beds reversed in their ordering of significance as predictors. Otherwise, the ordering between the two reporting systems is identical, indicating stability between the two.

Also of note is the fact that the relationship between MEDCENS and types of catchment population served is significant for active duty, dependents, and other beneficiaries. However, the strongest relationship is the other beneficiary relationship, followed by dependents and finally active duty. At large MEDDACS the relationships are just reversed, with active duty being the strongest, dependents second, and no statistical relationship with other beneficiaries. The ordering of the medium facilities mirrors that of large facilities, while the order at small facilities is identical to that at the MEDCENS.

Computations performed during the hierarchal regression process are at Appendix M. Table 1 shows the results of the hierarchal regression model. The F scores shown there indicate that available hours, eligible population, facility type, and quarter are statistically significant predictors for both MWU and MCCU workload. Of particular interest from Table 1 is the fact that operating beds is a statistically significant predictor of MCCU workload, but it is not for MWU workload. The fact that medical care composite units weight occupied bed days along with other factors while the medical work units provide no such weighting to beds could explain this difference.

One product of the regression process is a constant or weight for each of the independent predictors in the model. These weights, when substituted into the equations found at Appendix G, and then multiplied by the FY89 predictor variable values for each facility yield a predicted value for both MCCUs and MWUs. The next research step is to calculate a predicted annual MCCU and MWU value for each facility in HSC. Those calculations are at Appendix N, and a summary of the calculations is at Appendix O.

In addition to the summary of predicted values, the actual MWUs and MCCUs for facilities throughout the Command are at Appendix O. This appendix provides comparisons between predicted and actual values, and percentage differences for the FY89 data. In only 10 of the 37 total cases did the predictions for MWUs differ from actual values by more than 10 percent. Of those 10 instances, 6 were found to be in small facilities (hospitals with less than 50 beds). For MCCUs there were 15 facilities where the predicted values differed by more than 10 percent from FY89 actuals. Of the 15, eight were small facilities. The difficulty in modeling smaller facilities may well be a reflection of the fact that it takes minimum amounts of resources to operate them and the relationship between the independent variables does not allow as good a fit. I recommend additional research to better fit these variables and perhaps other variables to a model for smaller hospitals.

A final note concerning the percentage differences. For only 3 facilities; those at Dix, Stewart, and Wainwright; were the percent differences greater than 10 percent between the MCCU and MWU computations. At Ft. Dix the percent difference between actual and predicted MWUs was -8.9 percent while the percent difference between actual and predicted MCCUs was -22.9 percent. At Ft. Stewart the MWU percent delta was -60 percent, the largest noted on any computation for the entire Command, while the MCCU percent difference was -17.5. For Wainwright, the MWU percent difference was -17.9 versus the MCCU percent difference of -26.6. Variations of this nature would be prime targets for investigation by HSC since the model reflects a significant disparity.

I noted some significant differences between the data for Dix, Stewart, and Wainwright versus the rest of HSC which may explain in part the fact that they are producing less workload than their resourcing and demography suggest that they should. Ft. Stewart and Ft. Wainwright have very small retiree populations, and about 75 percent of the dispositions at Ft. Dix are active duty (Appendix P). The active duty and dependents of active duty populations are younger and naturally require less medical care than do retirees. Since the hospitals on these posts provide most of their care to the younger, healthier group, they appear to be overstaffed, or underutilizing their resources.

Other extraneous variables at Dix, Stewart, and Wainwright could influence their performance as well. Organizational behavior factors may explain some of the variance. All of these installations are somewhat remote, and may not be where healthcare providers want to be. Hospital and physician support available in surrounding communities may also influence the work performed. Although this study makes no attempt to quantify these extraneous variables, HSC senior leaders may look for such clues in assessing the performance of these hospitals.

Discussion of Findings

The lack of DRG creep noted in HSC may stem from several reasons. Facilities have not yet become familiar with the system, nor have they had the ability to manage under the DRG system. While encoder/groupers (software which will allow local facilities to determine which DRGs net them the most in reimbursement) are now at all HSC facilities, the training in and implementation of new programs takes time.

Perhaps of even greater significance, HSC's leaders decided to continue with the policy of basing only 5 percent of supply funding for each facility on their MWU workload during early FY90. Thus, the Command distributes 95 percent of all supply dollars as well as 100 percent of all other resources in the same manner as in previous years. The incentives for hospitals to change the way they do business are simply not yet in place.

The differences observed between the MWU and MCCU systems when modeled using hierarchal regression analysis are understandable. The finding that the MWU system is more sensitive to nursing hours while the MCCU system is more sensitive to physician hours may reflect the fact that the MWU system recognizes the acuity of care provided, and nursing staffs provide much of the care for very ill patients. The higher ordering of direct care provider hours under the MWU system points to this same fact.

Although the Command should refine predicted workload modeling before using it in Command resource distribution, the predictions are useful nonetheless. The weights developed in the regression process do not play favorites. The mission of every facility is "unique". Yet, the model establishes a baseline, and then HSC may authorize exceptions as warranted. The weights capture the actual performance of each and every facility included in the model and treat each of them the same. The true value of the model is that it provides the ability to evaluate each facility on how they are using the resources available to them in relation to how the rest of the Command uses their resources. Leaders can then assess individual situations after comparing them to the common baseline.

Conclusions and Recommendations

The fact that HSC facilities are not gaming the system is a positive finding. The Command is generating data still relatively unaffected by manipulation efforts. Valid data will facilitate further studies about how well the DRG based resourcing system fits available resources. The regression model developed in this paper is a starting point for further evaluation and study. Further research may need to consider other predictor variables in developing a refined model which could enable resource distribution in a more equitable manner.

The study contains weaknesses. Current data is difficult to obtain from the MEPRS system. The implementation of the EAS III software package will hopefully resolve that problem. However, it will not resolve reporting discrepancies between facilities. Only training, time, and continuing Command emphasis can hope to address those problems.

Factors which no one can model may well have the most significant impact of any yet mentioned. No study can hope to model the draw down of the military at this time. Congress and the military services are still deciding how to scale back the military. Yet, those decisions will affect the mission of health care facilities in HSC. The beneficiary population mix could shift. Other beneficiaries such as retirees may compose a larger percentage of those eligible for care in the future. Such a shift could alter the use of resources as well as the demographic characteristics at each facility.

The study listed the budgeting process earlier as an uncontrollable variable. Funding for the implementation of the MWU system may even be in jeopardy. Many Americans see the perceived decreased threat from the Soviet Union as a clear signal that Congress should cut Defense spending drastically. If the peace dividend is spent on national issues rather than improving the military health care system, the MWU system could lose the funding needed to move it forward. The development of new automated systems is difficult even under ideal circumstances, let alone when the budget is shrinking.

Despite the uncertainties surrounding the Department of Defense, HSC should not ignore the advantages of implementing a DRG based resourcing system. The ability to one day distribute resources based on the level of patient care being provided is a highly desirable goal. Tools such as this study which provides a model for assessing our current situation can aid in the process. The regression equations of this study allow the HSC staff to predict workload for future periods. I recommend that HSC use the results of this study to evaluate resource use by facilities within the Command. The Command should predict and evaluate workload data for future years to observe developing trends. Through such efforts, the Command can create a system which distributes resources in a more equitable manner than today's system.

References

A report to Congress on the allocation of resources using diagnosis related groups. (1987). Tri-Service Performance Working Group, Health Care Studies and Clinical Investigation Activity, 1-12.

Averill, R. (1985). Diagnosis related groups definitions manual, Health Systems International, 1-7.

Balinsky, W. & Starkman, J. (1987). The impact of DRGs on the healthcare industry, Health Care Management Review, 12(3), 61-70.

Burik, D. & Nackel, (1981). Diagnosis-related groups: Tool for Management, Hospitals and Health Services Administration, Winter, 26.

Emory, W. (1985). Business research methods (3rd ed.). Homewood, Illinois: Irwin.

Goldsmith, J. (1988). Competition's impact: A report from the front, Health Affairs, Summer, 162,167.

Grimaldi, P. & Micheletti, J. Diagnosis related groups, Chicago: Pluribus Press, Inc., 19.

Hartzke, L. (1983). DRGs: Concept and use. Institute for Health Planning, Madison, Wisconsin, National Technical Information Service, US Department of Commerce, (HRP-0904672).

Jemison, T. (1988). 'RAM model' unpopular in field, U.S. Medicine, 24, 1, 36, 37.

Major, J., (1989). Long range planning vision. United States Army Health Services Command 1989 Strategic Plan.

McFarling, D. (1988). Diagnosis related groups update - 14 December 1988). Health Care Studies and Clinical Investigation Activity, Video Cassette A1701--88-0255.

Medical Expense and Performance Reporting System for Fixed Military Medical and Dental Treatment Facilities. (1986). Assistant Secretary of Defense (Health Affairs).

Meyer, W. (1988). Fiscal Year 1989 Diagnosis Related Group Based Resource Allocation Guidance, Letter dated 5 August, 1988, Assistant Secretary of Defense for Health Affairs.

Nightingale, E. (1986). Experience with prospective payment in the Veterans Administration, American Psychologist, 41, 70-72.

Optenberg, S., Coventry, J., Baker, S., & Austin, V. (1987). Military health service system ambulatory work unit (AWU), Tri-serivce performance measurement working group. US Army Health Services Command, Fort Sam Houston, Texas: United States Army Health Care Studies and Clinical Investigation Activity. (Report HR88-001).

Rickard, J., Sanford, E., & Tempesco, J. (1988). A study using existing data sources to determine or develop management indicators for the allocation of resources to determine or develop management indicators for the allocation of resources which will enhance management at the MTF level while providing necessary management information upon which to base the allocation of resource during the transition period to DRGs, unpublished manuscript, U.S. Army - Baylor Master of Health Care Administration Program, 1-2.

Schactman, R., Snapinn, S., Quade, D., Freund, D., & Kronhaus, A. (1986). A method for constructing case-mix indexes, with application to hospital length of stay, Health Services Research, 20:6, 737-762.

Steinwald, B. & Dummit, L. (1989). Hospital case-mix change: Sicker patients or DRG creep, Health Affairs, Summer, 35-47.

Womack, D. & Fleming, H. (1986). Diagnostic related group (DRGs) and military health facilities: Competition or coordination:, Military Medicine, 151, 380-382.

TABLE ONE

WORKLOAD PREDICTION GMP

XX

TABLE 1

VARIABLE	R2	MEDICAL F	WORK DF1.DF2	UNITS F SCORE	P
AVAILABLE HOURS: PHY, RN DCP, PARA	0.9738	0.9738	4.143	1328	0.001
OPERATING BEDS	0.9739	0.0001	1.142	0.54	NS
ELIGIBLE POPULATION ACTIVE DUTY AD DEPENDENTS OTHER ELIGIBLES	0.9834	0.0095	3.139	26.52	0.001
FACILITY TYPE: MEDCEN LARGE MEDIUM SMALL	0.9845	0.0011	3.136	3.28	0.02
QUARTER: QTR1 QTR2 QTR3 QTR4	0.9864	0.0019	3.133	6.19	0.001

TABLE ONE

MEDICAL CARE COMPOSITE UNITS

VARIABLE	R2	F	DF1.DF2	F SCORE	P
AVAILABLE HOURS: PHY, RN DCP, PARA	0.9463	0.9463	4.143	630	0.001
OPERATING BEDS	0.9492	0.0029	1.142	8.1	0.005
ELIGIBLE POPULATION: ACTIVE DUTY AD DEPENDENTS OTHER ELIGIBLES	0.969	0.0198	3.139	29.6	0.001
FACILITY TYPE: MEDCEN LARGE MEDIUM SMALL	0.975	0.006	3.136	10.88	0.001
QUARTER: QTR1 QTR2 QTR3 QTR4	0.9783	0.0033	3.133	6.74	0.001

APPENDIX A

GLOSSARY

WORD/ACRONYM	DEFINITION
AD	Active duty beneficiaries
AMEDD	Army medical department
AoU	Regression constant
AWU	Ambulatory work unit
CENS	Medical centers
CHAMPUS	Civilian health and medical program of the Uniformed Services
CMI	Case mix index
COL	Colonel
CPHA	Commission on Professional and Hospital Activities
DCPHRS	Direct care professional hours
DCSRM	Deputy Chief of Staff for Resource Management, U.S. Army Health Services Command
DEP	Dependent of active duty
DMIS	Defense medical information systems
DOD	Department of Defense
DRG	Diagnosis Related Group
FT	Fort
FY	Fiscal year
HCFA	Health Care Financing Administration
HCMEA	Health Care Management Engineering Activity

WORD/ACRONYM	DEFINITION
HSC	U.S. Army Health Services Command
ICD9-CM	International Classification of Disease, Ninth Revision, Clinical Modification
IWU	Inpatient work unit
JCAHO	The Joint Commission on Accreditation of Health Care Organizations
Large	Large medical activities
LTC	Lieutenant Colonel
MCCU	Medical Care Composite Unit
MDC	Major diagnostic category
MEDDAC	Medical Activity
Medium	Medium medical activities
MEPRS	Medical Expense and Performance Reporting System
MTF	Medical Treatment Facility
MWU	Medical Work Unit
OPERBEDS	Operating beds
OTHBEN	Other beneficaries
PARAHRS	Direct care paraprofessional hours
PAS	Professional Activity Study
PHYHRS	Physician hours
QTR	Quarter
r	correlation coefficient
RCMI	Relative case mix index

WORD/ACRONYM	DEFINITION
RET	Retired from active duty
RNHRS	Nursing hours
RWP	Relative weighted product
Small	Small medical activities
VA	Veterans Administration

APPENDIX B

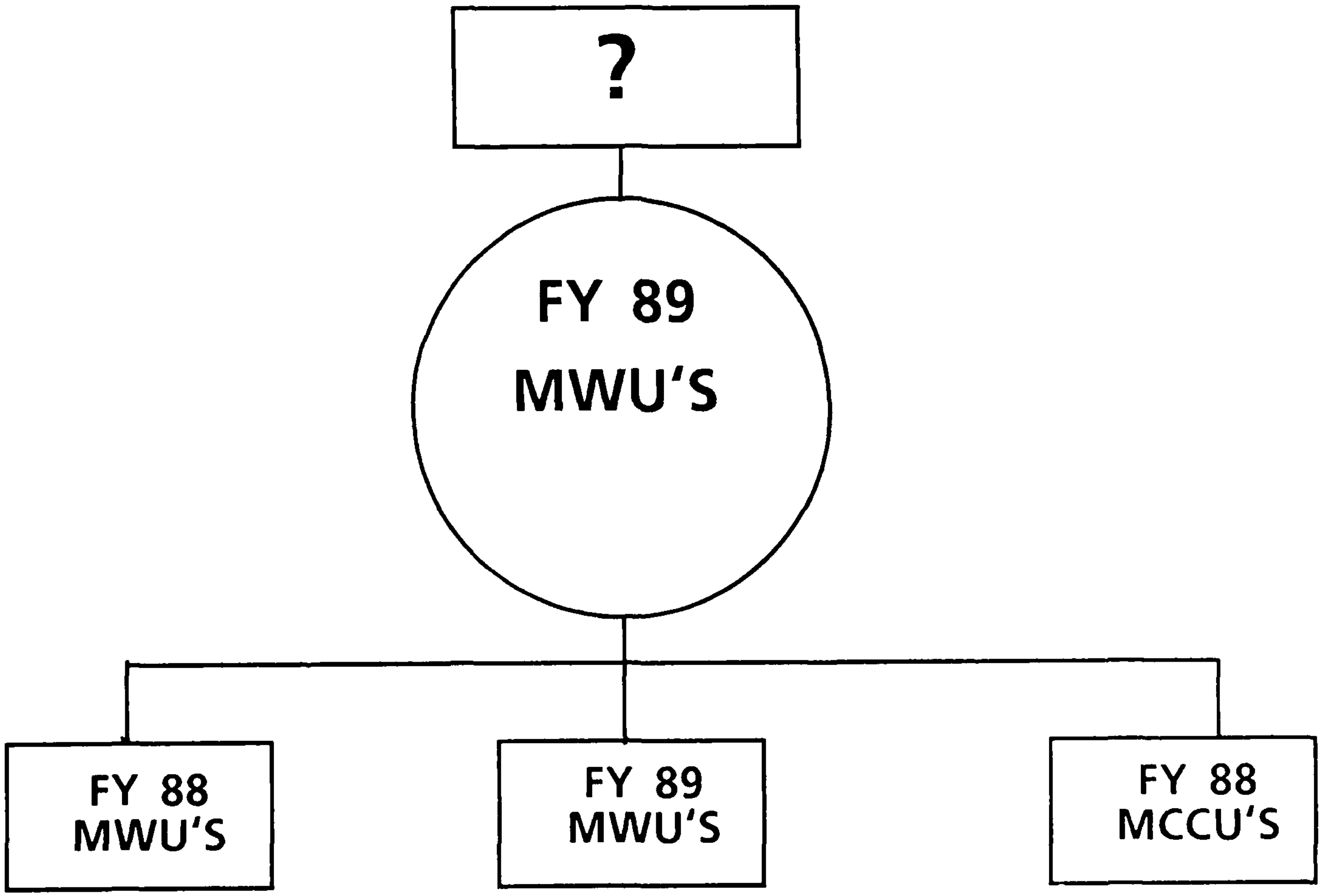
HEALTH SERVICES COMMAND
PEER GROUPS

Small MEDDACs <50 Beds	Medium MEDDACs 50-149 Beds	Large MEDDACs >150 Beds
Wainwright	Belvoir	Benning
Devens	Campbell	Bragg
Drum	Carson	Hood
Eustis	Dix	Knox
B. Harrison	Huachuca	L. Wood
Irwin	Jackson	Panama
Leavenworth	Lee	
Meade	McClellan	**MEDCENs**
Monmouth	Ord	WRAMC
Redstone Ars.	Polk	Fitzsimons
Rucker	Riley	Letterman
	Sill	Bliss
	Stewart	Gordon
	West Point	Lewis
* JMMC		* Sam Houston

TABLE 5

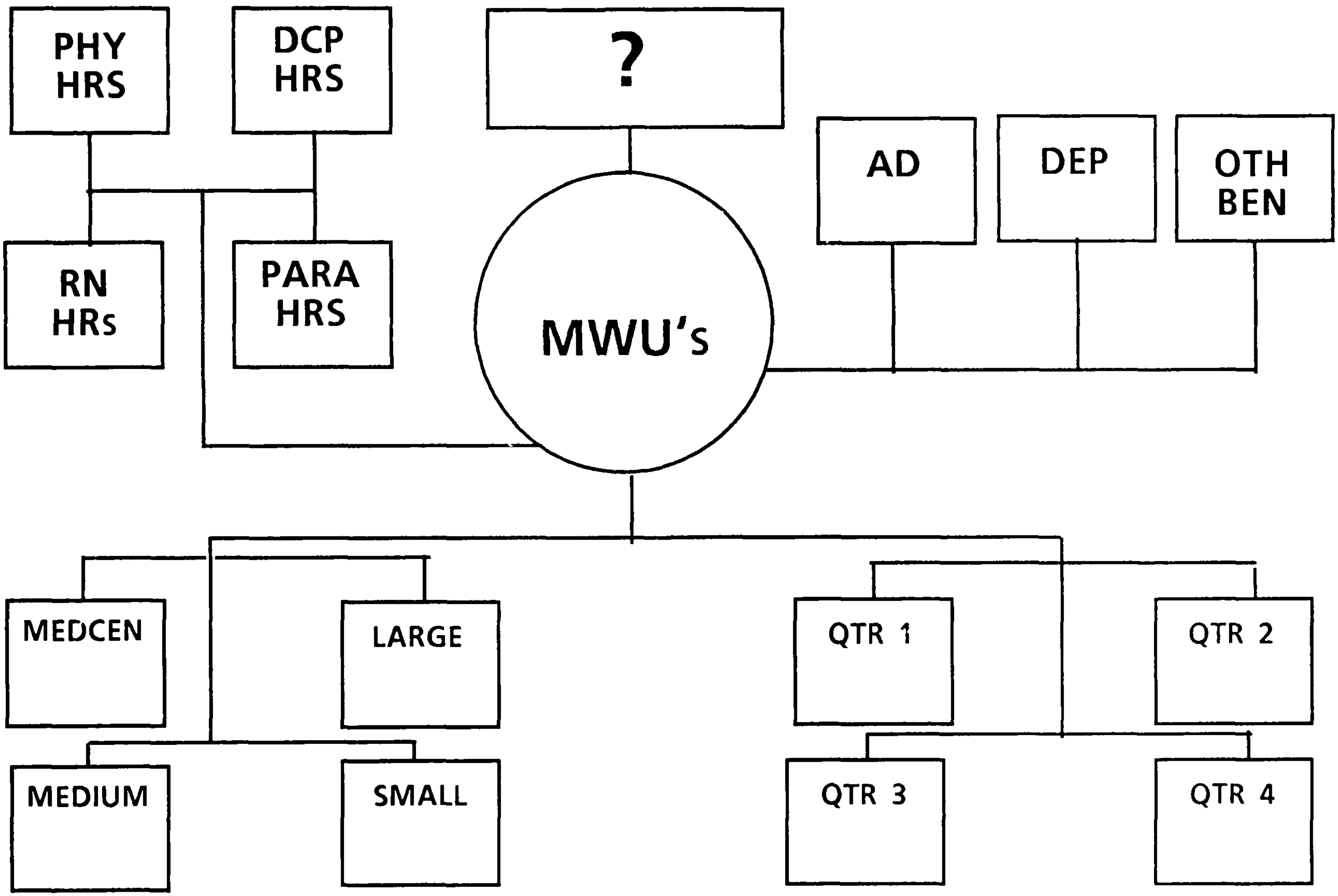
APPENDIX C

FIRST
CONCEPTUAL MODEL



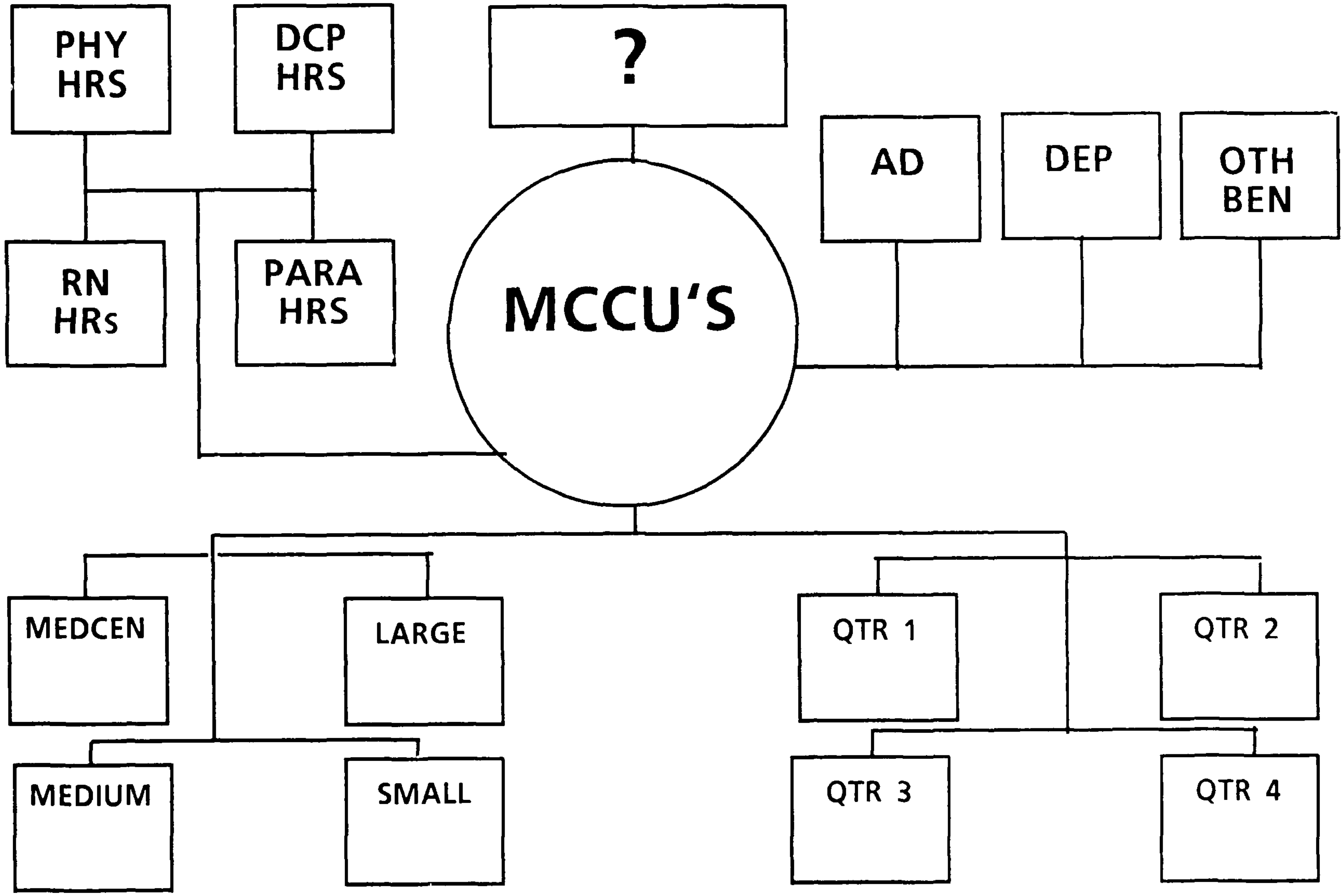
APPENDIX D

SECOND CONCEPTUAL MODEL



APPENDIX E

THIRD CONCEPTUAL MODEL



APPENDIX F

HEADER DATA FOR: A:BIGPIC LABEL:
NUMBER OF CASES: 37 NUMBER OF VARIABLES: 4

	FY89MWU	FY88MWU	FY89MCCU	FY88MCCU
1	36398.60	36330.40	1323.70	1291.50
2	41498.00	42681.00	1424.40	1380.20
3	27842.90	32014.60	981.10	1097.70
4	47567.10	49327.20	1916.40	1885.40
5	50459.50	50157.40	1964.00	1958.60
6	71366.90	71771.90	2194.80	2242.90
7	43528.70	44002.50	1701.60	1723.50
8	13328.60	14452.70	537.50	568.30
9	16097.60	16922.80	639.80	668.90
10	27629.60	29613.90	1054.20	1110.30
11	36533.40	37483.50	1438.80	1423.90
12	23118.00	25007.30	914.40	940.40
13	20970.90	18510.80	841.60	736.50
14	15069.70	15492.60	553.10	559.30
15	33085.20	30657.20	1390.40	1265.60
16	18201.00	18415.70	712.20	717.30
17	23110.20	23235.90	842.00	843.80
18	19756.10	19172.90	791.50	806.80
19	21222.80	21672.00	813.30	820.80
20	13998.50	13613.20	574.50	559.10
21	16910.20	16765.50	696.50	671.70
22	18317.90	19160.80	777.50	826.00
23	13929.10	14327.50	574.30	565.20
24	7444.70	7258.60	302.60	295.90
25	6970.50	7222.60	247.20	251.40
26	10045.60	10854.90	374.00	390.30
27	7672.70	8175.00	305.80	312.50
28	6807.60	7216.20	266.70	300.20
29	10111.50	10105.30	366.10	356.30
30	9610.10	8959.20	379.60	357.10
31	17723.20	16367.10	626.80	557.00
32	5085.50	5498.80	185.00	202.60
33	5730.60	5231.40	197.50	177.70
34	9000.70	8801.80	344.30	331.30
35	8136.90	8464.40	314.30	331.80
36	3751.70	3528.20	132.40	126.80
37	3807.70	3360.60	152.40	125.20

TOT PRIMU 307.3 "REPRODUCED AT GOVERNMENT EXPENSE" .4 290.9 425.5 482.5 508.5 442.0 511.3 15.7
GRAND TOT 29238.7 29338 27939.2 27460.6 30956.3 30936.7 29383.7 30029.2 28695.9 29456.9 29338.0 29517.0 0.6

NOTE: TOTALS MAY NOT ADD DUE TO ROUNDING.

MEDICAL WORK UNITS (MWU)

MTF NAME	1Q ACTUAL FY88	1Q ACTUAL FY89	2Q ACTUAL FY88	2Q ACTUAL FY89	3Q ACTUAL FY88	3Q ACTUAL FY89	4Q ACTUAL FY88	4Q ACTUAL FY89	4Q CUM FY88 ACTUAL	4Q CUM FY89 ACTUAL	PERCENT CHANGE
BAMC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DDEAMC	8616.5	8691.0	9620.3	9463.4	9222.8	9035.5	8870.8	9208.7	36330.4	36398.6	0.2
FAMC	10490.5	9835.6	11020.1	10226.0	11147.1	10888.0	10024.2	10548.4	42681.9	41498.0	-2.8
LAMC	7758.9	6813.4	8399.9	7303.0	8241.1	7229.8	7614.7	6496.7	32014.6	27842.9	-13.0
MAMC	11440.9	11322.5	12701.2	11615.6	12785.7	12556.9	12399.4	12072.1	49327.2	47567.1	-3.6
TAMC	12394.0	12278.5	12540.5	12781.3	12711.2	12687.7	12511.7	12712.0	50157.4	50459.5	0.6
WRAMC	17176.1	17117.3	18084.5	17527.2	18103.6	17805.9	18407.7	18916.5	71771.9	71366.9	-0.6
WBAMC	10511.5	10440.3	11454.4	11488.9	11173.7	11111.8	10862.9	10487.7	44002.5	43528.7	-1.1
PANAMA	3525.8	3312.5	3581.9	3433.4	3692.4	3343.6	3652.6	3239.1	14452.7	13328.6	-7.8
BELVOIR	4144.3	3862.1	4510.1	4196.7	4163.8	4178.8	4104.6	3860.0	16922.8	16097.6	-4.9
BENNING	7614.0	6446.7	8077.2	7267.3	7098.9	6599.4	6823.8	7316.2	29613.9	27629.6	-6.7
BRAGG	8826.4	8361.9	9339.8	9494.3	10140.9	9614.8	9176.4	9062.4	37483.5	36533.4	-2.5
CAMPBELL	5319.6	5425.5	6315.6	6003.0	6233.9	5828.1	7138.2	5861.4	25007.3	23118.0	-7.6
CARSON	4608.5	4692.2	4644.1	5392.0	4586.3	5459.5	4671.9	5427.2	18510.8	20970.9	13.3
DIX	3588.8	3240.0	4296.2	4029.3	3846.0	3957.2	3761.6	3843.2	15492.6	15069.7	-2.7
HOOD	6989.7	7902.5	7990.0	8129.3	7971.3	8776.6	7706.2	8276.8	30657.2	33085.2	7.9
JACKSON	4445.9	3944.3	4926.8	4595.2	4285.0	4227.6	4758.0	5433.9	18415.7	18201.0	-1.2
KNOX	5950.1	5641.9	6161.3	5884.1	5590.8	5743.9	5533.7	5840.3	23235.9	23110.2	-0.5
LWOOD	5253.9	3828.3	5020.0	4905.9	4439.7	5431.1	4459.3	5590.8	19172.9	19756.1	3.0
ORD	5446.7	5275.3	5666.0	5431.6	5283.9	5456.8	5275.4	5059.1	21672.0	21222.8	-2.1
POLK	3273.9	3345.5	3722.0	3621.9	3333.1	3622.1	3284.2	3408.8	13613.2	13998.5	2.8
RILEY	3932.8	4007.7	4261.4	4350.8	4444.5	4369.0	4126.8	4182.7	16765.5	16910.2	0.9
SILL	4541.9	4504.8	5079.0	4840.8	4725.4	4640.5	4814.5	4331.8	19160.8	18317.9	-4.4
STEWART	3385.2	3268.1	3840.4	3606.1	3585.8	3557.9	3516.1	3497.0	14327.5	13929.1	-2.8
ALASKA	1821.0	1717.0	1977.5	1912.7	1752.9	1912.5	1707.2	1902.5	7258.6	7444.7	2.6
DEVENS	1643.7	1681.7	1931.3	1930.4	1859.5	1818.2	1788.1	1540.2	7222.6	6970.5	-3.5
EUSTIS	2606.8	2315.2	2978.8	2722.7	2793.6	2501.2	2475.7	2506.5	10854.9	10045.6	-7.5
HUACHUCA	1986.9	1883.1	2185.5	2062.1	2066.4	1915.3	1936.2	1812.2	8175.0	7672.7	-6.1
LEAVENWORTH	1786.4	1626.0	2016.0	1812.4	1789.0	1674.4	1624.8	1694.8	7216.2	6807.6	-5.7
LEE	2465.7	2321.0	2671.6	2614.5	2494.1	2653.0	2473.9	2523.0	10105.3	10111.5	0.1
MCCLELLAN	2151.0	2192.8	2442.7	2477.7	2206.3	2368.4	2159.2	2571.2	8959.2	9610.1	7.3
MEADE	3894.9	3979.3	4326.6	4669.8	4133.7	4605.0	4011.9	4469.1	16367.1	17723.2	8.3
MONMOUTH	1354.3	1266.5	1431.7	1313.5	1454.0	1266.9	1258.8	1238.6	5498.8	5085.5	-7.5
REDSTONE	1204.1	1224.9	1325.6	1487.3	1400.2	1544.9	1301.5	1473.5	5231.4	5730.6	9.5
RUCKER	2153.3	2096.1	2321.3	2348.6	2102.9	2313.6	2224.3	2242.4	8801.8	9000.7	2.3
WPOINT	2020.2	2059.1	2133.2	1919.5	2018.0	1989.9	2293.0	2168.4	8464.4	8136.9	-3.9
DRUM	868.3	948.5	830.5	1075.6	870.1	1108.6	955.3	1098.4	3524.2	4231.1	20.1
BHARRISON	799.4	877.3	953.6	1007.4	872.5	908.0	902.7	959.0	3528.2	3751.7	6.3
IRWIN	695.7	909.7	851.1	1021.1	890.7	945.3	923.1	931.6	3360.6	3807.7	13.3
TOTAL HSC	186687.6	180656.1	201629.7	195962.4	195510.8	195647.9	191530.4	193804.2	775358.5	766070.6	-1.2

EXCLUDES BHG & BHH

AVERAGE DAILY MCCU

	FY88	FY89	1Q ACTUAL		2Q ACTUAL		3Q ACTUAL		4Q ACTUAL		4Q FY 89 CUM		PERCENT
MTF NAME	ACTUAL	PROGRAM	FY88	FY89	FY88	FY89	FY88	FY89	FY88	FY89	PROGRAM	ACTUAL	DEVIATION
BAMC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DDEAMC	1290.5	1312	1206.4	1235.8	1385.8	1395.0	1302.9	1333.4	1265.8	1330.1	1312	1323.7	0.9
FAMC	1380.2	1410	1397.0	1293.4	1455.7	1478.9	1392.3	1483.3	1278.3	1444.0	1410	1424.4	1.0
LAMC	1097.7	979	1034.9	934.5	1207.8	1052.7	1132.0	982.8	1014.6	957.3	979	981.1	0.2
MAMC	1887.5	1899	1772.8	1802.8	1981.3	1895.0	1946.8	2009.6	1854.0	1956.5	1899	1916.4	0.9
TAMC	1958.6	1972	1922.8	1890.6	2011.0	2020.5	1970.3	1971.2	1928.6	1976.2	1972	1964.0	-0.4
WRAMC	2244.9	2188	2151.7	2063.1	2294.9	2225.9	2262.0	2255.8	2270.4	2236.8	2188	2194.8	0.3
WBAMC	1721.8	1716	1628.6	1612.3	1834.3	1821.1	1743.7	1725.4	1680.6	1649.2	1716	1701.6	-0.8
PANAMA	574.6	540	554.3	546.4	580.9	581.9	587.5	516.0	576.4	507.8	540	537.5	-0.5
BELVOIR	668.7	647	643.2	611.8	726.2	675.4	654.5	668.5	653.5	607.3	647	639.8	-1.1
BENNING	1111.8	1042	1130.3	980.3	1226.1	1120.2	1062.9	1011.7	1028.4	1107.7	1042	1054.2	1.2
BRAGG	1423.8	1424	1358.8	1294.0	1462.3	1533.0	1525.1	1491.5	1351.1	1438.3	1424	1438.8	1.0
CAMPBELL	943.2	915	822.3	866.3	989.2	961.9	979.2	923.3	983.3	908.3	915	914.4	-0.1
CARSON	736.5	837	729.2	749.2	745.9	891.9	731.8	876.4	738.7	848.4	837	841.6	0.5
DIX	559.3	547	506.7	472.9	640.7	605.0	553.4	578.8	537.1	555.9	547	553.1	1.1
HOOD	1269.5	1400	1150.1	1330.3	1346.0	1400.4	1320.1	1467.5	1264.8	1364.7	1400	1390.4	-0.7
JACKSON	717.3	688	681.2	607.4	777.7	734.9	673.9	676.0	736.4	832.0	688	712.2	3.5
KNOX	844.3	837	824.5	752.1	929.5	913.8	820.4	865.3	804.1	836.3	837	842.0	0.6
L WOOD	807.1	776	885.8	644.4	869.1	805.3	734.2	848.0	738.1	866.4	776	791.5	2.0
ORD	822.2	815	821.8	800.0	853.3	847.7	809.0	831.5	805.9	776.9	815	813.3	-0.2
POLK	559.1	573	533.0	547.5	608.8	597.3	542.9	587.1	549.6	565.1	573	574.5	0.3
RILEY	671.7	699	617.7	636.7	703.8	736.9	700.8	721.9	665.1	692.4	699	696.5	-0.4
SILL	826.0	779	776.0	762.4	890.2	838.3	817.2	785.4	820.5	726.9	779	777.5	-0.2
STEWART	565.7	570	529.2	525.2	610.2	604.4	569.4	582.6	555.8	584.4	570	574.3	0.8
ALASKA	295.9	301	296.2	281.3	323.9	324.9	279.8	300.5	280.4	304.9	301	302.6	0.5
DEVENS	251.4	254	229.5	231.6	274.5	275.7	256.1	262.1	244.0	219.4	254	247.2	-2.7
EUSTIS	390.3	370	369.4	332.4	444.1	418.7	399.0	371.5	350.2	374.5	370	374.0	1.1
HUACHUCA	314.6	305	300.5	295.3	341.0	330.1	318.1	306.6	295.4	292.3	305	305.8	0.3
LEAVENWOR	300.2	265	300.8	260.1	338.9	290.0	303.2	257.8	256.4	258.5	265	266.7	0.6
LEE	356.3	365	339.9	333.3	378.9	391.0	355.9	381.5	348.7	360.4	365	366.1	0.3
MCCLELLAN	357.2	371	345.2	332.1	401.0	396.6	347.6	382.4	336.2	411.1	371	379.6	2.3
MEADE	561.9	621	535.1	563.8	605.4	676.3	560.2	655.5	547.4	611.4	621	626.8	0.9
MONMOUTH	202.4	186	198.0	184.8	217.6	193.5	211.8	186.6	181.9	176.3	186	185.0	-0.5
REDSTONE	177.7	196	157.6	168.3	188.1	210.9	193.0	209.6	173.1	200.2	196	197.5	0.8
RUCKER	332.2	344	324.0	317.4	351.6	366.8	316.7	352.1	334.3	340.4	344	344.3	0.1
WEST POIN	333.2	318	313.0	309.7	339.8	306.5	316.7	304.0	364.0	336.9	318	314.3	-1.2
DRUM	127.9	153	108.7	138.4	127.0	158.6	139.0	160.3	137.0	159.9	153	154.3	0.8
BEN HARRI	126.8	131	114.3	119.8	135.8	145.6	128.1	129.9	128.0	133.3	131	132.4	1.1
IRWIN	125.2	151	110.2	141.2	121.9	165.7	135.5	150.6	135.2	150.6	151	152.4	0.9
TOTL HSC	28931.4	28896	27720.7	26968.9	30719.8	30388.3	29092.8	29603.7	28213.4	28948.4	28896	29005.7	0.4
PRIMUS													
BELVOIR	175.5	174	174.5	169.5	188.7	184.3	176.4	0.0	162.8	172.3	174	174.6	0.3
STEWART	43.4	40	44.0	44.4	47.8	48.7	41.4	172.5	40.5	42.5	40	44.6	11.5
BENNING	15.7	40	0.0	45.3	0.0	52.0	20.3	42.8	42.2	44.2	40	47.2	18.0
BRAGG	23.4	40	0.0	64.6	0.0	67.4	30.7	47.1	62.8	71.4	40	67.0	67.5
HOOD	33.3	79	0.0	105.7	0.0	119.7	22.1	64.7	110.7	104.2	79	107.0	35.4
ORD	16.0	69	0.0	62.2	0.0	76.3	0.0	98.4	63.5	73.9	69	71.1	3.0
TOT PRIMU	307.3	442	218.5	491.7	236.5	548.4	290.9	425.5	482.5	508.5	442.0	511.3	15.7
GRAND TOT	29238.7	29338	27939.2	27460.6	30956.3	30936.7	29383.7	30029.2	28695.9	29456.9	29338.0	29517.0	0.6

NOTE: TOTALS MAY NOT ADD DUE TO ROUNDING.

MEDICAL WORK UNITS (MWU)

D:MCC78-87
MCCU FY88 DOES NOT INCLUDE BAMC

	ACTUAL FY 78	ACTUAL FY 79	ACTUAL FY 80	ACTUAL FY 81	ACTUAL FY 82	ACTUAL FY 83	ACTUAL FY 84	ACTUAL FY 85	ACTUAL FY 86	ACTUAL FY 87	ACTUAL FY 88	FY 89
BAMC	1722.8	1828.7	1927.2	2013.5	2028.5	2057.5	1994.4	1951.6	1993.8	1953.2	0.0	Ø
DDEAMC	1203.3	1275.8	1310.3	1348.7	1411.2	1395.1	1349.9	1388.3	1378.5	1327.9	1291.5	1320.9 +
FAMC	1376.5	1445.4	1548.2	1506.4	1433.0	1502.2	1439.8	1403.1	1385.5	1388.6	1380.2	1437.2 +
LAMC	1076.9	1046.5	1113.3	1164.6	1173.1	1176.1	1129.1	1100.5	1028.2	1055.1	1097.7	993.4 −
MAMC	1699.5	1700.2	1718.7	1768.6	1739.5	1798.7	1753.5	1736.8	1704.9	1904.4	1885.4	1759.7 +
TAMC	1799.5	1835.0	1820.8	1741.3	1789.1	1821.4	1826.2	1859.5	1882.0	1934.6	1958.6	2002.0 +
WRAMC	2093.2	2246.5	2390.7	2441.5	2392.1	2417.6	2387.8	2302.3	2335.5	2319.6	2242.9	2224.2 −
WBAMC	1661.6	1655.1	1665.7	1748.9	1698.7	1730.0	1703.4	1744.4	1709.3	1721.3	1723.5	1615.4 −
PANAMA	91.5	105.0	856.8	812.1	749.8	638.0	584.5	600.8	583.1	582.1	568.3	566.7 −
BELVOIR	597.8	685.1	706.1	747.1	763.1	746.0	729.0	742.6	705.4	676.9	668.9	555.7 −
BENNING	1013.4	1131.5	1133.1	1099.5	1126.8	1117.1	1072.2	1086.3	1130.7	1119.0	1110.3	1121.2 +
BRAGG	1212.5	1154.1	1251.7	1309.3	1289.3	1356.8	1340.7	1397.7	1436.9	1436.9	1423.9	1466.7 +
CAMPBELL	825.1	779.8	805.8	862.1	926.4	894.1	917.2	927.2	912.5	882.2	940.4	1332.9 −
CARSON	656.4	704.5	695.1	685.8	687.6	716.0	672.0	647.6	671.3	720.9	736.5	852.3
DIX	686.7	721.2	788.6	759.8	868.7	746.9	745.3	616.5	658.0	623.2	559.3	552.2 −
HOOD	1281.1	1273.8	1299.2	1387.7	1414.6	1358.5	1286.2	1298.5	1247.3	1284.3	1265.6	1324.2 +
JACKSON	920.4	903.8	994.3	1027.0	1011.2	982.0	821.2	810.2	802.8	762.5	717.3	751.7 +
KNOX	1045.5	1109.9	1121.7	978.2	1048.1	948.7	955.2	973.1	945.8	860.4	843.8	852.6 +
L WOOD	1003.1	1052.6	1138.9	1061.6	992.2	930.2	909.4	825.8	861.5	853.8	806.8	812.8 −
ORD	847.3	813.7	857.5	857.1	882.6	931.9	891.1	867.4	821.8	784.7	820.8	795.5 −
POLK	513.7	498.3	560.9	581.2	584.3	576.6	616.6	566.5	536.9	529.4	559.1	570.0 +
RILEY	540.1	599.2	614.2	657.2	656.5	730.9	710.7	700.5	654.1	661.6	671.7	691.0 +
SILL	718.6	802.3	901.6	909.5	947.4	977.1	928.9	877.6	883.9	856.1	826.0	771.5 −
STEWART	379.4	372.9	415.6	453.8	512.8	571.0	613.5	601.4	579.1	544.4	565.2	+ 606.9
ALASKA	234.9	169.2	200.4	217.1	224.1	224.3	228.1	241.5	248.1	276.7	295.9	302.9 +
DEVENS	318.8	355.9	330.3	322.7	302.9	311.3	316.3	299.8	326.6	247.6	251.4	226 −
EUSTIS	261.3	275.5	337.1	329.7	318.7	331.1	328.0	326.6	359.9	350.6	390.3	371.1 −
HUACHUCA	307.5	324.1	318.8	331.5	330.2	331.7	300.8	292.3	311.4	339.8	312.5	319.1 +
LEAVENWORTH	259.7	306.8	285.3	308.0	319.8	337.8	348.6	348.2	339.4	330.6	300.2	260.9 −
LEE	364.3	385.4	361.3	375.4	336.4	351.2	330.5	348.4	357.3	349.7	356.3	331.4 −
MCCLELLAN	253.8	289.1	321.3	333.5	379.1	355.7	414.0	370.0	378.3	380.2	357.1	411.7 +
MEADE	550.0	571.1	576.3	536.9	564.8	540.4	551.4	545.9	521.1	554.1	557.0	621.8 +
MONMOUTH	203.3	210.1	220.4	227.6	240.2	241.9	236.6	224.3	218.6	222.5	202.6	177.8 −
REDSTONE	203.5	222.2	244.1	226.0	223.7	216.8	207.0	199.4	190.2	193.0	177.7	210.4 +
RUCKER	274.4	241.8	242.2	236.7	272.1	281.8	301.9	301.6	292.3	320.4	331.3	346.3 +
WEST POINT	250.1	252.3	257.5	259.5	280.2	298.6	288.0	277.9	306.1	333.7	331.8	352.3
DRUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.0	125.3	160.0 +
BEN HARRISON	0.0	0.0	0.0	0.0	0.0	119.3	114.7	127.3	133.8	117.7	126.8	133.7 +
IRWIN	0.0	0.0	0.0	34.0	83.7	86.4	102.1	119.8	128.4	125.8	125.2	144.1 +
TOTL HSC	28449.4	29344.0	31331.0	31661.0	32002.0	32147.2	31448.2	31049.7	30958.4	31011.5	28901.8	

does not include PRIMUS

Mr Jim Birchley PCLOS / CPT Pat Dunn
Rm 112

22+
15−

Cary Tatum / SSG Nobles
DSG PER − 312
5762 / 2844
Rm. G124 / SFC Nobles

Cpt. Barnett −
clinic w/i facilities
6602 / 6527 / 4637

started

APPENDIX G

REGRESSION EQUATIONS

Model One: Equation One:

FY89 MWUs = f(FY89 MCCUs, FY88 MWUs, FY88 MCCUs)

Model Two:

Equation One:

MWUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS

Equation Two:

MWUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS + B4 OPERBEDS

Equation Three:

MWUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS + B5 OPERBEDS + B6 AD + B7 DEP + B8 OTHBEN

Equation Four:

MWUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS + B5 OPERBEDS + B6 AD + B7 DEP + B8 OTHBEN + B9 CENS + B10 LARGE + B11 MEDIUM + B12 SMALL

Equation Five:

MWUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS + B5 OPERBEDS + B6 AD + B7 DEP + B8 OTHBEN + B9 CENS + B10 LARGE + B11 MEDIUM + B12 SMALL + B13 QTR1 + B14 QTR2 + B3 QTR3 + B4 QTR4

Model Three:

Equation One:

MCCUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS

Equation Two:

MCCUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS + B4 OPERBEDS

Equation Three:

MCCUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS + B5 OPERBEDS + B6 AD + B7 DEP + B8 OTHBEN

Equation Four:

MCCUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS + B5 OPERBEDS + B6 AD + B7 DEP + B8 OTHBEN + B9 CENS + B10 LARGE + B11 MEDIUM + B12 SMALL

Equation Five:

MCCUs = AoU + B1 PHYHRS + B2 DCPHRS + B3 RNHRS + B4 PARA HRS + B5 OPERBEDS + B6 AD + B7 DEP + B8 OTHBEN + B9 CENS + B10 LARGE + B11 MEDIUM + B12 SMALL + B13 QTR1 + B14 QTR2 + B3 QTR3 + B4 QTR4

APPENDIX H

Facility	FY89 MWUs	AVERAGE DAILY MCCUs FY89	QTR1 FY89	QTR2 FY89	QTR3 FY89	QTR4 FY89	MEDCENS
WRAMC	17117.3	2063.1	1	0	0	0	1
LETTR	6813.4	934.5	1	0	0	0	1
FITZS	9835.6	1293.4	1	0	0	0	1
GORDN	8691	1235.8	1	0	0	0	1
TRIPL	12278.5	1890.6	1	0	0	0	1
MADGN	11322.5	1802.8	1	0	0	0	1
WBAMC	10440.3	1612.3	1	0	0	0	1
DIXNJ	3240	472.9	1	0	0	0	0
BENNG	6446.7	980.3	1	0	0	0	0
GORGA	3312.5	546.4	1	0	0	0	0
JAKSN	3944.3	607.4	1	0	0	0	0
FTORD	5275.3	800	1	0	0	0	0
CAMPB	5425.5	866.3	1	0	0	0	0
KNOXX	5641.9	752.1	1	0	0	0	0
CARSN	4692.2	749.2	1	0	0	0	0
LWOOD	3828.3	644.4	1	0	0	0	0
BRAGG	8361.9	1294	1	0	0	0	0
FSILL	4504.8	762.4	1	0	0	0	0
FHOOD	7902.5	1330.3	1	0	0	0	0
FTLEE	2321	333.3	1	0	0	0	0
MCCLN	2192.8	332.1	1	0	0	0	0
EUSTI	2315.2	332.4	1	0	0	0	0
STWRT	3268.1	525.2	1	0	0	0	0
RILEY	4007.7	636.7	1	0	0	0	0
WSTPT	2059.1	309.7	1	0	0	0	0
FPOLK	3345.5	547.5	1	0	0	0	0
BELVO	3862.1	611.8	1	0	0	0	0
MEADE	3979.3	563.8	1	0	0	0	0
DEVEN	1681.7	231.6	1	0	0	0	0
HUACH	1883.1	295.3	1	0	0	0	0
RUCKR	2096.1	317.4	1	0	0	0	0
ALASK	1717	281.3	1	0	0	0	0
REDST	1224.9	168.3	1	0	0	0	0
MONNJ	1266.5	184.8	1	0	0	0	0
LVNTH	1626	260.1	1	0	0	0	0
BENHR	877.3	119.8	1	0	0	0	0
IRWCA	909.7	141.2	1	0	0	0	0
WRAMC	17527.2	2225.9	0	1	0	0	1
LETTR	7303	1052.7	0	1	0	0	1
FITZS	10226	1478.9	0	1	0	0	1
GORDN	9463.4	1395	0	1	0	0	1
TRIPL	12781.3	2020.5	0	1	0	0	1
MADGN	11615.6	1895	0	1	0	0	1
WBAMC	11488.9	1821.1	0	1	0	0	1
DIXNJ	4029.3	605	0	1	0	0	0
BENNG	7267.3	1120.2	0	1	0	0	0

PHYSICIAN HOURS	DIRECT CARE PROVIDER HOURS	RN HOURS	PARA PROF HOURS	TOTAL HOURS
462047	420551	927984	2466851	8238485
213500	110392	483745	1075038	3096176
228567	197996	576267	1329382	4518127
234111	162205	560468	1618298	4037442
267900	195289	735082	1871756	5086506
291624	150124	604264	1639339	4174354
235967	167378	569795	1687963	4184820
93497	59265	190834	593879	1531326
134596	96233	281272	1017199	2303133
99770	71955	313959	656982	1904085
86207	119476	252773	629915	1670746
137120	137211	258635	846591	2247590
106871	154827	258022	871474	2123614
97132	167652	211600	911283	2180223
86723	96107	231453	673388	1654553
106791	134068	216518	893186	2121817
181789	193657	398627	1436467	3134497
126799	90492	208685	785842	1817922
171967	105578	324351	1242238	2743752
53737	53873	104469	507231	1071079
42275	56341	110006	396092	928940
64195	49859	85835	364261	1032061
88630	76198	201190	833465	1798597
82273	97067	176199	666270	1461609
51829	29147	115691	291900	797351
75427	45299	185212	705439	1495795
121137	63242	212411	597370	1532739
111868	90289	148862	575281	1605483
53837	31024	55485	327649	846772
42760	29729	103834	388946	859412
64906	55630	117587	471969	1139973
47530	40919	98437	549662	1119313
38016	24152	74853	223256	606482
45275	26154	55807	211843	505830
45663	39184	80893	317837	760917
25704	26334	25820	168978	387311
25571	17463	49373	189736	533883
462047	420551	927984	2466851	8238485
213500	110392	483745	1075038	3096176
228567	197996	576267	1329382	4518127
234111	162205	560468	1618298	4037442
267900	195289	735082	1871756	5086506
291624	150124	604264	1639339	4174354
235967	167378	569795	1687963	4184820
93497	59265	190834	593879	1531326
134596	96233	281272	1017199	2303133

LARGE MEDDACS	MEDIUM MEDDACS	SMALL MEDDACS	ACTIVE DUTY	DEP OF ACT DUT	TOAL BENEFIC	OTHER BENEFIC	OPER BEDS
0	0	0	20852	35236	81440	25352	758
0	0	0	6012	10166	54666	38488	310
0	0	0	15451	14398	72104	42255	448
0	0	0	17172	22414	85936	46350	373
0	0	0	62096	63445	151679	26138	487
0	0	0	29888	46233	137813	61692	370
0	0	0	20846	27928	81644	32870	396
1	0	0	17052	21095	71484	33337	107
1	0	0	26587	26063	77994	25344	213
1	0	0	13064	11237	25481	1180	150
1	0	0	15167	12285	49931	22479	135
1	0	0	22514	27155	68972	19303	125
1	0	0	23104	31065	67881	13712	144
1	0	0	23313	32461	94429	38655	169
1	0	0	19412	29087	71219	22720	120
1	0	0	20133	23009	83294	40152	153
1	0	0	50374	56794	138030	30862	238
1	0	0	21516	24863	69492	23113	131
1	0	0	38411	53661	120150	28078	201
0	1	0	9614	10562	38715	18539	53
0	1	0	9496	8204	28346	10646	61
0	1	0	12362	14679	41088	14047	48
0	1	0	18569	26256	55982	11157	90
0	1	0	15461	24518	47284	7305	111
0	1	0	6459	5127	26766	15180	56
0	1	0	15049	20700	41923	6174	85
0	1	0	15834	22612	85163	46717	95
0	0	1	22865	35643	123021	64513	43
0	0	1	7078	17078	57233	33077	31
0	0	1	7193	10945	27827	9689	55
0	0	1	8464	12600	34356	13292	42
0	0	1	12910	20492	39244	5842	38
0	0	1	3649	7044	26706	16013	27
0	0	1	6222	15321	66634	45091	23
0	0	1	6506	13274	37170	17390	26
0	0	1	4320	6945	25047	13782	5
0	0	1	6984	5370	13176	822	13
0	0	0	20892	33482	79662	25288	758
0	0	0	4718	9354	52399	38327	310
0	0	0	14925	15343	73620	43352	448
0	0	0	16879	23193	86711	46639	373
0	0	0	62026	63646	152707	27035	487
0	0	0	28485	48158	141458	64815	370
0	0	0	20763	29103	83804	33938	396
1	0	0	17413	21568	73931	34950	107
1	0	0	25018	27734	78665	25913	213

GORGA	3433.4	581.9	0	1	0	0	0
JAKSN	4595.2	734.9	0	1	0	0	0
FTORD	5431.6	847.7	0	1	0	0	0
CAMPB	6003	961.9	0	1	0	0	0
KNOXX	5884.1	913.8	0	1	0	0	0
CARSN	5392	891.9	0	1	0	0	0
LWOOD	4905.9	805.3	0	1	0	0	0
BRAGG	9494.3	1533	0	1	0	0	0
FSILL	4840.8	838.3	0	1	0	0	0
FHOOD	8129.3	1400.4	0	1	0	0	0
FTLEE	2614.5	391	0	1	0	0	0
MCCLN	2477.7	396.6	0	1	0	0	0
EUSTI	2722.7	418.7	0	1	0	0	0
STWRT	3606.1	604.4	0	1	0	0	0
RILEY	4350.8	736.9	0	1	0	0	0
WSTPT	1919.5	306.5	0	1	0	0	0
FPOLK	3621.9	597.3	0	1	0	0	0
BELVO	4196.7	675.4	0	1	0	0	0
MEADE	4669.8	676.3	0	1	0	0	0
DEVEN	1930.4	275.7	0	1	0	0	0
HUACH	2062.1	330.1	0	1	0	0	0
RUCKR	2348.6	366.9	0	1	0	0	0
ALASK	1912.7	324.5	0	1	0	0	0
REDST	1487.3	210.9	0	1	0	0	0
MONNJ	1313.5	193.5	0	1	0	0	0
LVNTH	1812.4	290	0	1	0	0	0
BENHR	1007.4	145.6	0	1	0	0	0
IRWCA	1021.1	165.7	0	1	0	0	0
WRAMC	17805.9	2255.8	0	0	1	0	1
LETTR	7229.8	982.8	0	0	1	0	1
FITZS	10888	1483.3	0	0	1	0	1
GORDN	9035.5	1333.4	0	0	1	0	1
TRIPL	12687.7	1971.2	0	0	1	0	1
MADGN	12556.9	2009.6	0	0	1	0	1
WBAMC	11111.8	1725.4	0	0	1	0	1
DIXNJ	3957.2	578.8	0	0	1	0	0
BENNG	6599.4	1011.7	0	0	1	0	0
GORGA	3343.6	516	0	0	1	0	0
JAKSN	4227.6	676	0	0	1	0	0
FTORD	5456.8	831.5	0	0	1	0	0
CAMPB	5828.1	923.3	0	0	1	0	0
KNOXX	5743.9	865.3	0	0	1	0	0
CARSN	5459.5	876.4	0	0	1	0	0
LWOOD	5431.1	848	0	0	1	0	0
BRAGG	9614.8	1491.5	0	0	1	0	0
FSILL	4640.5	785.4	0	0	1	0	0
FHOOD	8776.6	1467.5	0	0	1	0	0
FTLEE	2653	381.5	0	0	1	0	0
MCCLN	2368.4	382.4	0	0	1	0	0
EUSTI	2501.2	371.5	0	0	1	0	0

1	0	0	13831	10624	25295	840	150
1	0	0	12996	12704	48825	23125	135
1	0	0	22957	26770	69361	19634	125
1	0	0	22478	33411	70685	14796	144
1	0	0	21964	33939	96349	40446	169
1	0	0	18881	31082	73930	23967	120
1	0	0	20364	24910	86681	41407	153
1	0	0	55151	60244	148372	32977	238
1	0	0	19193	24294	66646	23159	131
1	0	0	38706	59168	127682	29808	201
0	1	0	8791	10694	38973	19488	53
0	1	0	8788	8376	28861	11697	61
0	1	0	10917	15802	42113	15394	48
0	1	0	18583	28071	58313	11659	90
0	1	0	15141	25377	48113	7595	111
0	1	0	6690	5501	27597	15406	56
0	1	0	15078	21390	42854	6386	85
0	1	0	15113	22240	87110	49757	95
0	0	1	23475	37787	125133	63871	43
0	0	1	7533	18019	59348	33796	31
0	0	1	6728	11274	28311	10309	55
0	0	1	8100	13099	35273	14074	42
0	0	1	13840	19806	39108	5462	38
0	0	1	3724	6954	27712	17034	27
0	0	1	6205	15388	65862	44269	23
0	0	1	6378	14037	38388	17973	26
0	0	1	4320	6945	25047	13782	5
0	0	1	9915	5614	16419	890	13
0	0	0	20892	33482	79662	25288	729
0	0	0	4718	9354	52399	38327	285
0	0	0	14925	15343	73620	43352	412
0	0	0	16879	23193	86711	46639	376
0	0	0	62026	63646	152707	27035	464
0	0	0	28485	48158	141458	64815	364
0	0	0	20763	29103	83804	33938	392
1	0	0	17413	21568	73931	34950	101
1	0	0	25018	27734	78665	25913	194
1	0	0	13831	10624	25295	840	139
1	0	0	12996	12704	48825	23125	129
1	0	0	22957	26770	69361	19634	129
1	0	0	22478	33411	70685	14796	141
1	0	0	21964	33939	96349	40446	158
1	0	0	18881	31082	73930	23967	129
1	0	0	20364	24910	86681	41407	130
1	0	0	55151	60244	148372	32977	221
1	0	0	19193	24294	66646	23159	127
1	0	0	38706	59168	127682	29808	203
0	1	0	8791	10694	38973	19488	60
0	1	0	8788	8376	28861	11697	59
0	1	0	10917	15802	42113	15394	47

99770	71955	313959	656982	1904085
86207	119476	252773	629915	1670746
137120	137211	258635	846591	2247590
106871	154827	258022	871474	2123614
97132	167652	211600	911283	2180223
86723	96107	231453	673388	1654553
106791	134068	216518	893186	2121817
181789	193657	398627	1436467	3134497
126799	90492	208685	785842	1817922
171967	105578	324351	1242238	2743752
53737	53873	104469	507231	1071079
42275	56341	110006	396092	928940
64195	49859	85835	364261	1032061
88630	76198	201190	833465	1798597
82273	97067	176199	666270	1461609
51829	29147	115691	291900	797351
75427	45299	185212	705439	1495795
121137	63242	212411	597370	1532739
111868	90289	148862	575281	1605483
53837	31024	55485	327649	846772
42760	29729	103834	388946	859412
64906	55630	117587	471969	1139973
47530	40919	98437	549662	1119313
38016	24152	74853	223256	606482
45275	26154	55807	211843	505830
45663	39184	80893	317837	760917
25704	26334	25820	168978	387311
25571	17463	49373	189736	533883
462047	420551	927984	2466851	8238485
213500	110392	483745	1075038	3096176
228567	197996	576267	1329382	4518127
234111	162205	560468	1618298	4037442
267900	195289	735082	1871756	5086506
291624	150124	604264	1639339	4174354
235967	167378	569795	1687963	4184820
93497	59265	190834	593879	1531326
134596	96233	281272	1017199	2303133
99770	71955	313959	656982	1904085
86207	119476	252773	629915	1670746
137120	137211	258635	846591	2247590
106871	154827	258022	871474	2123614
97132	167652	211600	911283	2180223
86723	96107	231453	673388	1654553
106791	134068	216518	893186	2121817
181789	193657	398627	1436467	3134497
126799	90492	208685	785842	1817922
171967	105578	324351	1242238	2743752
53737	53873	104469	507231	1071079
42275	56341	110006	396092	928940
64195	49859	85835	364261	1032061

STWRT	3557.9	582.6	0	0	1	0	0
RILEY	4369	721.9	0	0	1	0	0
WSTPT	1989.9	304	0	0	1	0	0
FPOLK	3622.3	587.1	0	0	1	0	0
BELVO	4178.8	668.5	0	0	1	0	0
MEADE	4605	655.5	0	0	1	0	0
DEVEN	1818.2	262.1	0	0	1	0	0
HUACH	1915.3	306.6	0	0	1	0	0
RUCKR	2313.6	352.1	0	0	1	0	0
ALASK	1912.5	300.5	0	0	1	0	0
REDST	1544.9	209.6	0	0	1	0	0
MONNJ	1266.9	186.6	0	0	1	0	0
LVNTH	1674.4	257.8	0	0	1	0	0
BENHR	908	129.9	0	0	1	0	0
IRWCA	945.3	150.6	0	0	1	0	0
WRAMC	18916.5	2236.8	0	0	0	1	1
LETTR	6496.7	957.3	0	0	0	1	1
FITZS	10548.4	1444	0	0	0	1	1
GORDN	9208.7	1330.1	0	0	0	1	1
TRIPL	12712	1976.2	0	0	0	1	1
MADGN	12072.1	1956.5	0	0	0	1	1
WBAMC	10487.7	1649.2	0	0	0	1	1
DIXNJ	3843.2	555.9	0	0	0	1	0
BENNG	7316.2	1107.7	0	0	0	1	0
GORGA	3239.1	507.8	0	0	0	1	0
JAKSN	5433.9	832	0	0	0	1	0
FTORD	5059.1	776.9	0	0	0	1	0
CAMPB	5861.4	908.3	0	0	0	1	0
KNOXX	5840.3	836.3	0	0	0	1	0
CARSN	5427.2	848.4	0	0	0	1	0
LWOOD	5590.8	866.4	0	0	0	1	0
BRAGG	9062.4	1438.3	0	0	0	1	0
FSILL	4331.8	726.9	0	0	0	1	0
FHOOD	8276.8	1364.7	0	0	0	1	0
FTLEE	2523	360.4	0	0	0	1	0
MCCLN	2571.2	411.1	0	0	0	1	0
EUSTI	2506.5	374.5	0	0	0	1	0
STWRT	3497	584.4	0	0	0	1	0
RILEY	4182.7	692.4	0	0	0	1	0
WSTPT	2168.4	336.9	0	0	0	1	0
FPOLK	3408.8	565.1	0	0	0	1	0
BELVO	3860	607.3	0	0	0	1	0
MEADE	4469.1	611.4	0	0	0	1	0
DEVEN	1540.2	219.4	0	0	0	1	0
HUACH	1812.2	292.3	0	0	0	1	0
RUCKR	2242.4	340.4	0	0	0	1	0
ALASK	1902.5	304.9	0	0	0	1	0
REDST	1473.5	200.2	0	0	0	1	0
MONNJ	1238.6	176.3	0	0	0	1	0
LVNTH	1694.8	258.5	0	0	0	1	0

0	1	0	18583	28071	58313	11659	91
0	1	0	15141	25377	48113	7595	109
0	1	0	6690	5501	27597	15406	44
0	1	0	15078	21390	42854	6386	92
0	1	0	15113	22240	87110	49757	82
0	0	1	23475	37787	125133	63871	59
0	0	1	7533	18019	59348	33796	26
0	0	1	6728	11274	28311	10309	44
0	0	1	8100	13099	35273	14074	42
0	0	1	13840	19806	39108	5462	36
0	0	1	3724	6954	27712	17034	27
0	0	1	6205	15388	65862	44269	18
0	0	1	6378	14037	38388	17973	20
0	0	1	4320	6945	25047	13782	10
0	0	1	9915	5614	16419	890	18
0	0	0	20711	33482	79481	25288	729
0	0	0	4583	9534	52264	38147	285
0	0	0	14264	15343	72959	43352	412
0	0	0	16564	23193	86396	46639	376
0	0	0	61944	63646	152625	27035	475
0	0	0	28654	48158	141627	64815	364
0	0	0	20825	29103	83866	33938	392
1	0	0	18316	21568	74834	34950	101
1	0	0	25683	27734	79330	25913	194
1	0	0	14162	10624	26038	1252	139
1	0	0	14197	12704	50026	23125	129
1	0	0	23070	26770	69474	19634	129
1	0	0	22468	33411	70675	14796	141
1	0	0	22143	33939	96528	40446	158
1	0	0	18876	31082	73925	23967	129
1	0	0	21232	24910	87549	41407	130
1	0	0	55568	60244	148789	32977	221
1	0	0	19498	24294	66951	23159	127
1	0	0	38505	59168	127481	29808	203
0	1	0	8793	10694	38975	19488	60
0	1	0	8917	8376	28990	11697	59
0	1	0	12012	15802	43208	15394	47
0	1	0	18569	28071	58299	11659	91
0	1	0	15540	25377	48512	7595	109
0	1	0	6803	5501	27710	15406	44
0	1	0	15065	21390	42841	6386	92
0	1	0	15396	22240	87393	49757	82
0	0	1	23483	37787	125141	63871	59
0	0	1	7482	18019	59297	33796	26
0	0	1	6756	11274	28339	10309	44
0	0	1	8071	13099	35244	14074	42
0	0	1	13808	21119	40389	5462	36
0	0	1	3756	6954	27744	17034	27
0	0	1	6176	15388	65833	44269	18
0	0	1	6370	14037	38380	17973	20

88630	76198	201190	833465	1798597
82273	97067	176199	666270	1461609
51829	29147	115691	291900	797351
75427	45299	185212	705439	1495795
121137	63242	212411	597370	1532739
111868	90289	148862	575281	1605483
53837	31024	55485	327649	846772
42760	29729	103834	388946	859412
64906	55630	117587	471969	1139973
47530	40919	98437	549662	1119313
38016	24152	74853	223256	606482
45275	26154	55807	211843	505830
45663	39184	80893	317837	760917
25704	26334	25820	168978	387311
25571	17463	49373	189736	533883
462047	420551	927984	2466851	8238485
213500	110392	483745	1075038	3096176
228567	197996	576267	1329382	4518127
234111	162205	560468	1618298	4037442
267900	195289	735082	1871756	5086506
291624	150124	604264	1639339	4174354
235967	167378	569795	1687963	4184820
93497	59265	190834	593879	1531326
134596	96233	281272	1017199	2303133
99770	71955	313959	656982	1904085
86207	119476	252773	629915	1670746
137120	137211	258635	846591	2247590
106871	154827	258022	871474	2123614
97132	167652	211600	911283	2180223
86723	96107	231453	673388	1654553
106791	134068	216518	893186	2121817
181789	193657	398627	1436467	3134497
126799	90492	208685	785842	1817922
171967	105578	324351	1242238	2743752
53737	53873	104469	507231	1071079
42275	56341	110006	396092	928940
64195	49859	85835	364261	1032061
88630	76198	201190	833465	1798597
82273	97067	176199	666270	1461609
51829	29147	115691	291900	797351
75427	45299	185212	705439	1495795
121137	63242	212411	597370	1532739
111868	90289	148862	575281	1605483
53837	31024	55485	327649	846772
42760	29729	103834	388946	859412
64906	55630	117587	471969	1139973
47530	40919	98437	549662	1119313
38016	24152	74853	223256	606482
45275	26154	55807	211843	505830
45663	39184	80893	317837	760917

BENHR	959	133.3	0	0	0	1	0
IRWCA	931.6	150.6	0	0	0	1	0

0	0	1	4320	6945	25047	13782	10
0	0	1	10268	5614	16772	890	18

25704	26334	25820	168978	387311
25571	17463	49373	189736	533883

APPENDIX I

---------------------- CORRELATION MATRIX ----------------------

HEADER DATA FOR: A:BIGPIC   LABEL:
NUMBER OF CASES: 37   NUMBER OF VARIABLES: 4

	FY89MWU	FY88MWU	FY89MCCU	FY88MCCU
FY89MWU	1.00000			
FY88MWU	.99735	1.00000		
FY89MCCU	.98630	.98262	1.00000	
FY88MCCU	.98710	.98803	.99700	1.00000

CRITICAL VALUE (1-TAIL, .05) = + Or - .27490
CRITICAL VALUE (2-tail, .05) = +/- .32409

N = 37

APPENDIX J

-------------------- DESCRIPTIVE STATISTICS --------------------

HEADER DATA FOR: A:BIGPIC LABEL:
NUMBER OF CASES: 37 NUMBER OF VARIABLES: 4

NO.	NAME	N	MEAN	STD. DEV.	MINIMUM	MAXIMUM
1	FY89MWU	37	20590.2568	15396.7688	3751.7000	71366.9000
2	FY88MWU	37	20860.3622	15638.9364	3360.6000	71771.9000
3	FY89MCCU	37	779.7919	549.3366	132.4000	2194.8000
4	FY88MCCU	37	777.8324	549.0491	125.2000	2242.9000

APPENDIX K

HEADER DATA FOR: A:FINGMPOK   LABEL:
NUMBER OF CASES: 148   NUMBER OF VARIABLES: 20

	MWUs	MCCUs	QTR1	QTR2	QTR3	QTR4	CENS
1	17117.30	2063.10	1.00	.00	.00	.00	1.00
2	6813.40	934.50	1.00	.00	.00	.00	1.00
3	9835.60	1293.40	1.00	.00	.00	.00	1.00
4	8691.00	1235.80	1.00	.00	.00	.00	1.00
5	12278.50	1890.60	1.00	.00	.00	.00	1.00
6	11322.50	1802.80	1.00	.00	.00	.00	1.00
7	10440.30	1612.30	1.00	.00	.00	.00	1.00
8	3240.00	472.90	1.00	.00	.00	.00	.00
9	6446.70	980.30	1.00	.00	.00	.00	.00
10	3312.50	546.40	1.00	.00	.00	.00	.00
11	3944.30	607.40	1.00	.00	.00	.00	.00
12	5275.30	800.00	1.00	.00	.00	.00	.00
13	5425.50	866.30	1.00	.00	.00	.00	.00
14	5641.90	752.10	1.00	.00	.00	.00	.00
15	4692.20	749.20	1.00	.00	.00	.00	.00
16	3828.30	644.40	1.00	.00	.00	.00	.00
17	8361.90	1294.00	1.00	.00	.00	.00	.00
18	4504.80	762.40	1.00	.00	.00	.00	.00
19	7902.50	1330.30	1.00	.00	.00	.00	.00
20	2321.00	333.30	1.00	.00	.00	.00	.00
21	2192.80	332.10	1.00	.00	.00	.00	.00
22	2315.20	332.40	1.00	.00	.00	.00	.00
23	3268.10	525.20	1.00	.00	.00	.00	.00
24	4007.70	636.70	1.00	.00	.00	.00	.00
25	2059.10	309.70	1.00	.00	.00	.00	.00
26	3345.50	547.50	1.00	.00	.00	.00	.00
27	3862.10	611.80	1.00	.00	.00	.00	.00
28	3979.30	563.80	1.00	.00	.00	.00	.00
29	1681.70	231.60	1.00	.00	.00	.00	.00
30	1883.10	295.30	1.00	.00	.00	.00	.00
31	2096.10	317.40	1.00	.00	.00	.00	.00
32	1717.00	281.30	1.00	.00	.00	.00	.00
33	1224.90	168.30	1.00	.00	.00	.00	.00
34	1266.50	184.80	1.00	.00	.00	.00	.00
35	1626.00	260.10	1.00	.00	.00	.00	.00
36	877.30	119.80	1.00	.00	.00	.00	.00
37	909.70	141.20	1.00	.00	.00	.00	.00
38	17527.20	2225.90	.00	1.00	.00	.00	1.00
39	7303.00	1052.70	.00	1.00	.00	.00	1.00
40	10226.00	1478.90	.00	1.00	.00	.00	1.00
41	9463.40	1395.00	.00	1.00	.00	.00	1.00
42	12781.30	2020.50	.00	1.00	.00	.00	1.00
43	11615.60	1895.00	.00	1.00	.00	.00	1.00
44	11488.90	1821.10	.00	1.00	.00	.00	1.00
45	4029.30	605.00	.00	1.00	.00	.00	.00
46	7267.30	1120.20	.00	1.00	.00	.00	.00
47	3433.40	581.90	.00	1.00	.00	.00	.00
48	4595.20	734.90	.00	1.00	.00	.00	.00
49	5431.60	847.70	.00	1.00	.00	.00	.00
50	6003.00	961.90	.00	1.00	.00	.00	.00
51	5884.10	913.80	.00	1.00	.00	.00	.00
52	5392.00	891.90	.00	1.00	.00	.00	.00
53	4905.90	805.30	.00	1.00	.00	.00	.00

54	9494.30	1533.00	.00	1.00	.00	.00	.00
55	4840.80	838.30	.00	1.00	.00	.00	.00
56	8129.30	1400.40	.00	1.00	.00	.00	.00
57	2614.50	391.00	.00	1.00	.00	.00	.00
58	2477.70	396.60	.00	1.00	.00	.00	.00
59	2722.70	418.70	.00	1.00	.00	.00	.00
60	3606.10	604.40	.00	1.00	.00	.00	.00
61	4350.80	736.90	.00	1.00	.00	.00	.00
62	1919.50	306.50	.00	1.00	.00	.00	.00
63	3621.90	597.30	.00	1.00	.00	.00	.00
64	4196.70	675.40	.00	1.00	.00	.00	.00
65	4669.80	676.30	.00	1.00	.00	.00	.00
66	1930.40	275.70	.00	1.00	.00	.00	.00
67	2062.10	330.10	.00	1.00	.00	.00	.00
68	2348.60	366.90	.00	1.00	.00	.00	.00
69	1912.70	324.50	.00	1.00	.00	.00	.00
70	1487.30	210.90	.00	1.00	.00	.00	.00
71	1313.50	193.50	.00	1.00	.00	.00	.00
72	1812.40	290.00	.00	1.00	.00	.00	.00
73	1007.40	145.60	.00	1.00	.00	.00	.00
74	1021.10	165.70	.00	1.00	.00	.00	.00
75	17805.90	2255.80	.00	.00	1.00	.00	1.00
76	7229.80	982.80	.00	.00	1.00	.00	1.00
77	10888.00	1483.30	.00	.00	1.00	.00	1.00
78	9035.50	1333.40	.00	.00	1.00	.00	1.00
79	12687.70	1971.20	.00	.00	1.00	.00	1.00
80	12556.90	2009.60	.00	.00	1.00	.00	1.00
81	11111.80	1725.40	.00	.00	1.00	.00	1.00
82	3957.20	578.80	.00	.00	1.00	.00	.00
83	6599.40	1011.70	.00	.00	1.00	.00	.00
84	3343.60	516.00	.00	.00	1.00	.00	.00
85	4227.60	676.00	.00	.00	1.00	.00	.00
86	5456.80	831.50	.00	.00	1.00	.00	.00
87	5828.10	923.30	.00	.00	1.00	.00	.00
88	5743.90	865.30	.00	.00	1.00	.00	.00
89	5459.50	876.40	.00	.00	1.00	.00	.00
90	5431.10	848.00	.00	.00	1.00	.00	.00
91	9614.80	1491.50	.00	.00	1.00	.00	.00
92	4640.50	785.40	.00	.00	1.00	.00	.00
93	8776.60	1467.50	.00	.00	1.00	.00	.00
94	2653.00	381.50	.00	.00	1.00	.00	.00
95	2368.40	382.40	.00	.00	1.00	.00	.00
96	2501.20	371.50	.00	.00	1.00	.00	.00
97	3557.90	582.60	.00	.00	1.00	.00	.00
98	4369.00	721.90	.00	.00	1.00	.00	.00
99	1989.90	304.00	.00	.00	1.00	.00	.00
100	3622.30	587.10	.00	.00	1.00	.00	.00
101	4178.80	668.50	.00	.00	1.00	.00	.00
102	4605.00	655.50	.00	.00	1.00	.00	.00
103	1818.20	262.10	.00	.00	1.00	.00	.00
104	1915.30	306.60	.00	.00	1.00	.00	.00
105	2313.60	352.10	.00	.00	1.00	.00	.00
106	1912.50	300.50	.00	.00	1.00	.00	.00
107	1544.90	209.60	.00	.00	1.00	.00	.00
108	1266.90	186.60	.00	.00	1.00	.00	.00
109	1674.40	257.80	.00	.00	1.00	.00	.00
110	908.00	129.90	.00	.00	1.00	.00	.00
111	945.30	150.60	.00	.00	1.00	.00	.00
112	18916.50	2236.80	.00	.00	.00	1.00	1.00
113	6496.70	957.30	.00	.00	.00	1.00	1.00

114	10548.40	1444.00	.00	.00	.00	1.00	1.00
115	9208.70	1330.10	.00	.00	.00	1.00	1.00
116	12712.00	1976.20	.00	.00	.00	1.00	1.00
117	12072.10	1956.50	.00	.00	.00	1.00	1.00
118	10487.70	1649.20	.00	.00	.00	1.00	1.00
119	3843.20	555.90	.00	.00	.00	1.00	.00
120	7316.20	1107.70	.00	.00	.00	1.00	.00
121	3239.10	507.80	.00	.00	.00	1.00	.00
122	5433.90	832.00	.00	.00	.00	1.00	.00
123	5059.10	776.90	.00	.00	.00	1.00	.00
124	5861.40	908.30	.00	.00	.00	1.00	.00
125	5840.30	836.30	.00	.00	.00	1.00	.00
126	5427.20	848.40	.00	.00	.00	1.00	.00
127	5590.80	866.40	.00	.00	.00	1.00	.00
128	9062.40	1438.30	.00	.00	.00	1.00	.00
129	4331.80	726.90	.00	.00	.00	1.00	.00
130	8276.80	1364.70	.00	.00	.00	1.00	.00
131	2523.00	360.40	.00	.00	.00	1.00	.00
132	2571.20	411.10	.00	.00	.00	1.00	.00
133	2506.50	374.50	.00	.00	.00	1.00	.00
134	3497.00	584.40	.00	.00	.00	1.00	.00
135	4182.70	692.40	.00	.00	.00	1.00	.00
136	2168.40	336.90	.00	.00	.00	1.00	.00
137	3408.80	565.10	.00	.00	.00	1.00	.00
138	3860.00	607.30	.00	.00	.00	1.00	.00
139	4469.10	611.40	.00	.00	.00	1.00	.00
140	1540.20	219.40	.00	.00	.00	1.00	.00
141	1812.20	292.30	.00	.00	.00	1.00	.00
142	2242.40	340.40	.00	.00	.00	1.00	.00
143	1902.50	304.90	.00	.00	.00	1.00	.00
144	1473.50	200.20	.00	.00	.00	1.00	.00
145	1238.60	176.30	.00	.00	.00	1.00	.00
146	1694.80	258.50	.00	.00	.00	1.00	.00
147	959.00	133.30	.00	.00	.00	1.00	.00
148	931.60	150.60	.00	.00	.00	1.00	.00

	LARGE	MED	SMALL	AD	DEP	TOTBEN	OTHBEN
1	.00	.00	.00	20852.00	35236.00	81440.00	25352.00
2	.00	.00	.00	6012.00	10166.00	54666.00	38488.00
3	.00	.00	.00	15451.00	14398.00	72104.00	42255.00
4	.00	.00	.00	17172.00	22414.00	85936.00	46350.00
5	.00	.00	.00	62096.00	63445.00	151679.00	26138.00
6	.00	.00	.00	29888.00	46233.00	137813.00	61692.00
7	.00	.00	.00	20846.00	27928.00	81644.00	32870.00
8	1.00	.00	.00	17052.00	21095.00	71484.00	33337.00
9	1.00	.00	.00	26587.00	26063.00	77994.00	25344.00
10	1.00	.00	.00	13064.00	11237.00	25481.00	1180.00
11	1.00	.00	.00	15167.00	12285.00	49931.00	22479.00
12	1.00	.00	.00	22514.00	27155.00	68972.00	19303.00
13	1.00	.00	.00	23104.00	31065.00	67881.00	13712.00
14	1.00	.00	.00	23313.00	32461.00	94429.00	38655.00
15	1.00	.00	.00	19412.00	29087.00	71219.00	22720.00
16	1.00	.00	.00	20133.00	23009.00	83294.00	40152.00
17	1.00	.00	.00	50374.00	56794.00	138030.00	30862.00
18	1.00	.00	.00	21516.00	24863.00	69492.00	23113.00
19	1.00	.00	.00	38411.00	53661.00	120150.00	28078.00
20	.00	1.00	.00	9614.00	10562.00	38715.00	18539.00
21	.00	1.00	.00	9496.00	8204.00	28346.00	10646.00
22	.00	1.00	.00	12362.00	14679.00	41088.00	14047.00
23	.00	1.00	.00	18569.00	26256.00	55982.00	11157.00

24	.00	1.00	.00	15461.00	24518.00	47284.00	7305.00
25	.00	1.00	.00	6459.00	5127.00	26766.00	15180.00
26	.00	1.00	.00	15049.00	20700.00	41923.00	6174.00
27	.00	1.00	.00	15834.00	22612.00	85163.00	46717.00
28	.00	.00	1.00	22865.00	35643.00	123021.00	64513.00
29	.00	.00	1.00	7078.00	17078.00	57233.00	33077.00
30	.00	.00	1.00	7193.00	10945.00	27827.00	9689.00
31	.00	.00	1.00	8464.00	12600.00	34356.00	13292.00
32	.00	.00	1.00	12910.00	20492.00	39244.00	5842.00
33	.00	.00	1.00	3649.00	7044.00	26706.00	16013.00
34	.00	.00	1.00	6222.00	15321.00	66634.00	45091.00
35	.00	.00	1.00	6506.00	13274.00	37170.00	17390.00
36	.00	.00	1.00	4320.00	6945.00	25047.00	13782.00
37	.00	.00	1.00	6984.00	5370.00	13176.00	822.00
38	.00	.00	.00	20892.00	33482.00	79662.00	25288.00
39	.00	.00	.00	4718.00	9354.00	52399.00	38327.00
40	.00	.00	.00	14925.00	15343.00	73620.00	43352.00
41	.00	.00	.00	16879.00	23193.00	86711.00	46639.00
42	.00	.00	.00	62026.00	63646.00	152707.00	27035.00
43	.00	.00	.00	28485.00	48158.00	141458.00	64815.00
44	.00	.00	.00	20763.00	29103.00	83804.00	33938.00
45	1.00	.00	.00	17413.00	21568.00	73931.00	34950.00
46	1.00	.00	.00	25018.00	27734.00	78665.00	25913.00
47	1.00	.00	.00	13831.00	10624.00	25295.00	840.00
48	1.00	.00	.00	12996.00	12704.00	48825.00	23125.00
49	1.00	.00	.00	22957.00	26770.00	69361.00	19634.00
50	1.00	.00	.00	22478.00	33411.00	70685.00	14796.00
51	1.00	.00	.00	21964.00	33939.00	96349.00	40446.00
52	1.00	.00	.00	18881.00	31082.00	73930.00	23967.00
53	1.00	.00	.00	20364.00	24910.00	86681.00	41407.00
54	1.00	.00	.00	55151.00	60244.00	148372.00	32977.00
55	1.00	.00	.00	19193.00	24294.00	66646.00	23159.00
56	1.00	.00	.00	38706.00	59168.00	127682.00	29808.00
57	.00	1.00	.00	8791.00	10694.00	38973.00	19488.00
58	.00	1.00	.00	8788.00	8376.00	28861.00	11697.00
59	.00	1.00	.00	10917.00	15802.00	42113.00	15394.00
60	.00	1.00	.00	18583.00	28071.00	58313.00	11659.00
61	.00	1.00	.00	15141.00	25377.00	48113.00	7595.00
62	.00	1.00	.00	6690.00	5501.00	27597.00	15406.00
63	.00	1.00	.00	15078.00	21390.00	42854.00	6386.00
64	.00	1.00	.00	15113.00	22240.00	87110.00	49757.00
65	.00	.00	1.00	23475.00	37787.00	125133.00	63871.00
66	.00	.00	1.00	7533.00	18019.00	59348.00	33796.00
67	.00	.00	1.00	6728.00	11274.00	28311.00	10309.00
68	.00	.00	1.00	8100.00	13099.00	35273.00	14074.00
69	.00	.00	1.00	13840.00	19806.00	39108.00	5462.00
70	.00	.00	1.00	3724.00	6954.00	27712.00	17034.00
71	.00	.00	1.00	6205.00	15388.00	65862.00	44269.00
72	.00	.00	1.00	6378.00	14037.00	38388.00	17973.00
73	.00	.00	1.00	4320.00	6945.00	25047.00	13782.00
74	.00	.00	1.00	9915.00	5614.00	16419.00	890.00
75	.00	.00	.00	20892.00	33482.00	79662.00	25288.00
76	.00	.00	.00	4718.00	9354.00	52399.00	38327.00
77	.00	.00	.00	14925.00	15343.00	73620.00	43352.00
78	.00	.00	.00	16879.00	23193.00	86711.00	46639.00
79	.00	.00	.00	62026.00	63646.00	152707.00	27035.00
80	.00	.00	.00	28485.00	48158.00	141458.00	64815.00
81	.00	.00	.00	20763.00	29103.00	83804.00	33938.00
82	1.00	.00	.00	17413.00	21568.00	73931.00	34950.00
83	1.00	.00	.00	25018.00	27734.00	78665.00	25913.00

84	1.00	.00	.00	13831.00	10624.00	25295.00	840.00
85	1.00	.00	.00	12996.00	12704.00	48825.00	23125.00
86	1.00	.00	.00	22957.00	26770.00	69361.00	19634.00
87	1.00	.00	.00	22478.00	33411.00	70685.00	14796.00
88	1.00	.00	.00	21964.00	33939.00	96349.00	40446.00
89	1.00	.00	.00	18881.00	31082.00	73930.00	23967.00
90	1.00	.00	.00	20364.00	24910.00	86681.00	41407.00
91	1.00	.00	.00	55151.00	60244.00	148372.00	32977.00
92	1.00	.00	.00	19193.00	24294.00	66646.00	23159.00
93	1.00	.00	.00	38706.00	59168.00	127682.00	29808.00
94	.00	1.00	.00	8791.00	10694.00	38973.00	19488.00
95	.00	1.00	.00	8788.00	8376.00	28861.00	11697.00
96	.00	1.00	.00	10917.00	15802.00	42113.00	15394.00
97	.00	1.00	.00	18583.00	28071.00	58313.00	11659.00
98	.00	1.00	.00	15141.00	25377.00	48113.00	7595.00
99	.00	1.00	.00	6690.00	5501.00	27597.00	15406.00
100	.00	1.00	.00	15078.00	21390.00	42854.00	6386.00
101	.00	1.00	.00	15113.00	22240.00	87110.00	49757.00
102	.00	.00	1.00	23475.00	37787.00	125133.00	63871.00
103	.00	.00	1.00	7533.00	18019.00	59348.00	33796.00
104	.00	.00	1.00	6728.00	11274.00	28311.00	10309.00
105	.00	.00	1.00	8100.00	13099.00	35273.00	14074.00
106	.00	.00	1.00	13840.00	19806.00	39108.00	5462.00
107	.00	.00	1.00	3724.00	6954.00	27712.00	17034.00
108	.00	.00	1.00	6205.00	15388.00	65862.00	44269.00
109	.00	.00	1.00	6378.00	14037.00	38388.00	17973.00
110	.00	.00	1.00	4320.00	6945.00	25047.00	13782.00
111	.00	.00	1.00	9915.00	5614.00	16419.00	890.00
112	.00	.00	.00	20711.00	33482.00	79481.00	25288.00
113	.00	.00	.00	4583.00	9534.00	52264.00	38147.00
114	.00	.00	.00	14264.00	15343.00	72959.00	43352.00
115	.00	.00	.00	16564.00	23193.00	86396.00	46639.00
116	.00	.00	.00	61944.00	63646.00	152625.00	27035.00
117	.00	.00	.00	28654.00	48158.00	141627.00	64815.00
118	.00	.00	.00	20825.00	29103.00	83866.00	33938.00
119	1.00	.00	.00	18316.00	21568.00	74834.00	34950.00
120	1.00	.00	.00	25683.00	27734.00	79330.00	25913.00
121	1.00	.00	.00	14162.00	10624.00	26038.00	1252.00
122	1.00	.00	.00	14197.00	12704.00	50026.00	23125.00
123	1.00	.00	.00	23070.00	26770.00	69474.00	19634.00
124	1.00	.00	.00	22468.00	33411.00	70675.00	14796.00
125	1.00	.00	.00	22143.00	33939.00	96528.00	40446.00
126	1.00	.00	.00	18876.00	31082.00	73925.00	23967.00
127	1.00	.00	.00	21232.00	24910.00	87549.00	41407.00
128	1.00	.00	.00	55568.00	60244.00	148789.00	32977.00
129	1.00	.00	.00	19498.00	24294.00	66951.00	23159.00
130	1.00	.00	.00	38505.00	59168.00	127481.00	29808.00
131	.00	1.00	.00	8793.00	10694.00	38975.00	19488.00
132	.00	1.00	.00	8917.00	8376.00	28990.00	11697.00
133	.00	1.00	.00	12012.00	15802.00	43208.00	15394.00
134	.00	1.00	.00	18569.00	28071.00	58299.00	11659.00
135	.00	1.00	.00	15540.00	25377.00	48512.00	7595.00
136	.00	1.00	.00	6803.00	5501.00	27710.00	15406.00
137	.00	1.00	.00	15065.00	21390.00	42841.00	6386.00
138	.00	1.00	.00	15396.00	22240.00	87393.00	49757.00
139	.00	.00	1.00	23483.00	37787.00	125141.00	63871.00
140	.00	.00	1.00	7482.00	18019.00	59297.00	33796.00
141	.00	.00	1.00	6756.00	11274.00	28339.00	10309.00
142	.00	.00	1.00	8071.00	13099.00	35244.00	14074.00
143	.00	.00	1.00	13808.00	21119.00	40389.00	5462.00

144	.00	.00	1.00	3756.00	6954.00	27744.00	17034.00
145	.00	.00	1.00	6176.00	15388.00	65833.00	44269.00
146	.00	.00	1.00	6370.00	14037.00	38380.00	17973.00
147	.00	.00	1.00	4320.00	6945.00	25047.00	13782.00
148	.00	.00	1.00	10268.00	5614.00	16772.00	890.00

	OPERBEDS	PHYHRS	DCPHRS	RNHRS	PARAHRS	TOTHRS
1	758.00	462047.00	420551.00	927984.00	2466851.00	8238485.00
2	310.00	213500.00	110392.00	483745.00	1075038.00	3096176.00
3	448.00	228567.00	197996.00	576267.00	1329382.00	4518127.00
4	373.00	234111.00	162205.00	560468.00	1618298.00	4037442.00
5	487.00	267900.00	195289.00	735082.00	1871756.00	5086506.00
6	370.00	291624.00	150124.00	604264.00	1639339.00	4174354.00
7	396.00	235967.00	167378.00	569795.00	1687963.00	4184820.00
8	107.00	93497.00	59265.00	190834.00	593879.00	1531326.00
9	213.00	134596.00	96233.00	281272.00	1017199.00	2303133.00
10	150.00	99770.00	71955.00	313959.00	656982.00	1904085.00
11	135.00	86207.00	119476.00	252773.00	629915.00	1670746.00
12	125.00	137120.00	137211.00	258635.00	846591.00	2247590.00
13	144.00	106871.00	154827.00	258022.00	871474.00	2123614.00
14	169.00	97132.00	167652.00	211600.00	911283.00	2180223.00
15	120.00	86723.00	96107.00	231453.00	673388.00	1654553.00
16	153.00	106791.00	134068.00	216518.00	893186.00	2121817.00
17	238.00	181789.00	193657.00	398627.00	1436467.00	3134497.00
18	131.00	126799.00	90492.00	208685.00	785842.00	1817922.00
19	201.00	171967.00	105578.00	324351.00	1242238.00	2743752.00
20	53.00	53737.00	53873.00	104469.00	507231.00	1071079.00
21	61.00	42275.00	56341.00	110006.00	396092.00	928940.00
22	48.00	64195.00	49859.00	85835.00	364261.00	1032061.00
23	90.00	88630.00	76198.00	201190.00	833465.00	1798597.00
24	111.00	82273.00	97067.00	176199.00	666270.00	1461609.00
25	56.00	51829.00	29147.00	115691.00	291900.00	797351.00
26	85.00	75427.00	45299.00	185212.00	705439.00	1495795.00
27	95.00	121137.00	63242.00	212411.00	597370.00	1532739.00
28	43.00	111868.00	90289.00	148862.00	575281.00	1605483.00
29	31.00	53837.00	31024.00	55485.00	327649.00	846772.00
30	55.00	42760.00	29729.00	103834.00	388946.00	859412.00
31	42.00	64906.00	55630.00	117587.00	471969.00	1139973.00
32	38.00	47530.00	40919.00	98437.00	549662.00	1119313.00
33	27.00	38016.00	24152.00	74853.00	223256.00	606482.00
34	23.00	45275.00	26154.00	55807.00	211843.00	505830.00
35	26.00	45663.00	39184.00	80893.00	317837.00	760917.00
36	5.00	25704.00	26334.00	25820.00	168978.00	387311.00
37	13.00	25571.00	17463.00	49373.00	189736.00	533883.00
38	758.00	462047.00	420551.00	927984.00	2466851.00	8238485.00
39	310.00	213500.00	110392.00	483745.00	1075038.00	3096176.00
40	448.00	228567.00	197996.00	576267.00	1329382.00	4518127.00
41	373.00	234111.00	162205.00	560468.00	1618298.00	4037442.00
42	487.00	267900.00	195289.00	735082.00	1871756.00	5086506.00
43	370.00	291624.00	150124.00	604264.00	1639339.00	4174354.00
44	396.00	235967.00	167378.00	569795.00	1687963.00	4184820.00
45	107.00	93497.00	59265.00	190834.00	593879.00	1531326.00
46	213.00	134596.00	96233.00	281272.00	1017199.00	2303133.00
47	150.00	99770.00	71955.00	313959.00	656982.00	1904085.00
48	135.00	86207.00	119476.00	252773.00	629915.00	1670746.00
49	125.00	137120.00	137211.00	258635.00	846591.00	2247590.00
50	144.00	106871.00	154827.00	258022.00	871474.00	2123614.00
51	169.00	97132.00	167652.00	211600.00	911283.00	2180223.00
52	120.00	86723.00	96107.00	231453.00	673388.00	1654553.00
53	153.00	106791.00	134068.00	216518.00	893186.00	2121817.00

54	238.00	181789.00	193657.00	398627.00	1436467.00	3134497.00
55	131.00	126799.00	90492.00	208685.00	785842.00	1817922.00
56	201.00	171967.00	105578.00	324351.00	1242238.00	2743752.00
57	53.00	53737.00	53873.00	104469.00	507231.00	1071079.00
58	61.00	42275.00	56341.00	110006.00	396092.00	928940.00
59	48.00	64195.00	49859.00	85835.00	364261.00	1032061.00
60	90.00	88630.00	76198.00	201190.00	833465.00	1798597.00
61	111.00	82273.00	97067.00	176199.00	666270.00	1461609.00
62	56.00	51829.00	29147.00	115691.00	291900.00	797351.00
63	85.00	75427.00	45299.00	185212.00	705439.00	1495795.00
64	95.00	121137.00	63242.00	212411.00	597370.00	1532739.00
65	43.00	111868.00	90289.00	148862.00	575281.00	1605483.00
66	31.00	53837.00	31024.00	55485.00	327649.00	846772.00
67	55.00	42760.00	29729.00	103834.00	388946.00	859412.00
68	42.00	64906.00	55630.00	117587.00	471969.00	1139973.00
69	38.00	47530.00	40919.00	98437.00	549662.00	1119313.00
70	27.00	38016.00	24152.00	74853.00	223256.00	606482.00
71	23.00	45275.00	26154.00	55807.00	211843.00	505830.00
72	26.00	45663.00	39184.00	80893.00	317837.00	760917.00
73	5.00	25704.00	26334.00	25820.00	168978.00	387311.00
74	13.00	25571.00	17463.00	49373.00	189736.00	533883.00
75	729.00	462047.00	420551.00	927984.00	2466851.00	8238485.00
76	285.00	213500.00	110392.00	483745.00	1075038.00	3096176.00
77	412.00	228567.00	197996.00	576267.00	1329382.00	4518127.00
78	376.00	234111.00	162205.00	560468.00	1618298.00	4037442.00
79	464.00	267900.00	195289.00	735082.00	1871756.00	5086506.00
80	364.00	291624.00	150124.00	604264.00	1639339.00	4174354.00
81	392.00	235967.00	167378.00	569795.00	1687963.00	4184820.00
82	101.00	93497.00	59265.00	190834.00	593879.00	1531326.00
83	194.00	134596.00	96233.00	281272.00	1017199.00	2303133.00
84	139.00	99770.00	71955.00	313959.00	656982.00	1904085.00
85	129.00	86207.00	119476.00	252773.00	629915.00	1670746.00
86	129.00	137120.00	137211.00	258635.00	846591.00	2247590.00
87	141.00	106871.00	154827.00	258022.00	871474.00	2123614.00
88	158.00	97132.00	167652.00	211600.00	911283.00	2180223.00
89	129.00	86723.00	96107.00	231453.00	673388.00	1654553.00
90	130.00	106791.00	134068.00	216518.00	893186.00	2121817.00
91	221.00	181789.00	193657.00	398627.00	1436467.00	3134497.00
92	127.00	126799.00	90492.00	208685.00	785842.00	1817922.00
93	203.00	171967.00	105578.00	324351.00	1242238.00	2743752.00
94	60.00	53737.00	53873.00	104469.00	507231.00	1071079.00
95	59.00	42275.00	56341.00	110006.00	396092.00	928940.00
96	47.00	64195.00	49859.00	85835.00	364261.00	1032061.00
97	91.00	88630.00	76198.00	201190.00	833465.00	1798597.00
98	109.00	82273.00	97067.00	176199.00	666270.00	1461609.00
99	44.00	51829.00	29147.00	115691.00	291900.00	797351.00
100	92.00	75427.00	45299.00	185212.00	705439.00	1495795.00
101	82.00	121137.00	63242.00	212411.00	597370.00	1532739.00
102	59.00	111868.00	90289.00	148862.00	575281.00	1605483.00
103	26.00	53837.00	31024.00	55485.00	327649.00	846772.00
104	44.00	42760.00	29729.00	103834.00	388946.00	859412.00
105	42.00	64906.00	55630.00	117587.00	471969.00	1139973.00
106	36.00	47530.00	40919.00	98437.00	549662.00	1119313.00
107	27.00	38016.00	24152.00	74853.00	223256.00	606482.00
108	18.00	45275.00	26154.00	55807.00	211843.00	505830.00
109	20.00	45663.00	39184.00	80893.00	317837.00	760917.00
110	10.00	25704.00	26334.00	25820.00	168978.00	387311.00
111	18.00	25571.00	17463.00	49373.00	189736.00	533883.00
112	729.00	462047.00	420551.00	927984.00	2466851.00	8238485.00
113	285.00	213500.00	110392.00	483745.00	1075038.00	3096176.00

114	412.00	228567.00	197996.00	576267.00	1329382.00	4518127.00
115	376.00	234111.00	162205.00	560468.00	1618298.00	4037442.00
116	475.00	267900.00	195289.00	735082.00	1871756.00	5086506.00
117	364.00	291624.00	150124.00	604264.00	1639339.00	4174354.00
118	392.00	235967.00	167378.00	569795.00	1687963.00	4184820.00
119	101.00	93497.00	59265.00	190834.00	593879.00	1531326.00
120	194.00	134596.00	96233.00	281272.00	1017199.00	2303133.00
121	139.00	99770.00	71955.00	313959.00	656982.00	1904085.00
122	129.00	86207.00	119476.00	252773.00	629915.00	1670746.00
123	129.00	137120.00	137211.00	258635.00	846591.00	2247590.00
124	141.00	106871.00	154827.00	258022.00	871474.00	2123614.00
125	158.00	97132.00	167652.00	211600.00	911283.00	2180223.00
126	129.00	86723.00	96107.00	231453.00	673388.00	1654553.00
127	130.00	106791.00	134068.00	216518.00	893186.00	2121817.00
128	221.00	181789.00	193657.00	398627.00	1436467.00	3134497.00
129	127.00	126799.00	90492.00	208685.00	785842.00	1817922.00
130	203.00	171967.00	105578.00	324351.00	1242238.00	2743752.00
131	60.00	53737.00	53873.00	104469.00	507231.00	1071079.00
132	59.00	42275.00	56341.00	110006.00	396092.00	928940.00
133	47.00	64195.00	49859.00	85835.00	364261.00	1032061.00
134	91.00	88630.00	76198.00	201190.00	833465.00	1798597.00
135	109.00	82273.00	97067.00	176199.00	666270.00	1461609.00
136	44.00	51829.00	29147.00	115691.00	291900.00	797351.00
137	92.00	75427.00	45299.00	185212.00	705439.00	1495795.00
138	82.00	121137.00	63242.00	212411.00	597370.00	1532739.00
139	59.00	111868.00	90289.00	148862.00	575281.00	1605483.00
140	26.00	53837.00	31024.00	55485.00	327649.00	846772.00
141	44.00	42760.00	29729.00	103834.00	388946.00	859412.00
142	42.00	64906.00	55630.00	117587.00	471969.00	1139973.00
143	36.00	47530.00	40919.00	98437.00	549662.00	1119313.00
144	27.00	38016.00	24152.00	74853.00	223256.00	606482.00
145	18.00	45275.00	26154.00	55807.00	211843.00	505830.00
146	20.00	45663.00	39184.00	80893.00	317837.00	760917.00
147	10.00	25704.00	26334.00	25820.00	168978.00	387311.00
148	18.00	25571.00	17463.00	49373.00	189736.00	533883.00

-------------------- DESCRIPTIVE STATISTICS --------------------

HEADER DATA FOR: A:FINGMPOK LABEL:
NUMBER OF CASES: 148 NUMBER OF VARIABLES: 20

NO.	NAME	N	MEAN	STD. DEV.	MINIMUM	MAXIMUM
1	MWUs	148	5147.5642	3820.8534	877.3000	18916.5000
2	MCCUs	148	780.0182	545.8940	119.8000	2255.8000
3	QTR1	148	.2500	.4345	.0000	1.0000
4	QTR2	148	.2500	.4345	.0000	1.0000
5	QTR3	148	.2500	.4345	.0000	1.0000
6	QTR4	148	.2500	.4345	.0000	1.0000
7	CENS	148	.1892	.3930	.0000	1.0000
8	LARGE	148	.3243	.4697	.0000	1.0000
9	MED	148	.2162	.4131	.0000	1.0000
10	SMALL	148	.2703	.4456	.0000	1.0000
11	AD	148	17559.2230	12372.2983	3649.0000	62096.0000
12	DEP	148	23464.6014	14715.6290	5127.0000	63646.0000
13	TOTBEN	148	66492.4865	35483.7679	13176.0000	152707.0000
14	OTHBEN	148	25468.6622	15901.7240	822.0000	64815.0000
15	OPERBEDS	148	157.3311	158.9491	5.0000	758.0000
16	PHYHRS	148	120097.5946	90883.9290	25571.0000	462047.0000
17	DCPHRS	148	99523.2432	76168.9431	17463.0000	420551.0000
18	RNHRS	148	259629.6757	209592.9273	25820.0000	927984.0000
19	PARAHRS	148	811736.6486	529024.6568	168978.0000	2466851.0000
20	TOTHRS	148	2087911.2162	1580993.9599	387311.0000	8238485.0000

APPENDIX L

--------------------- CORRELATION MATRIX ---------------------

HEADER DATA FOR: A:FINGMPOK LABEL:
NUMBER OF CASES: 148 NUMBER OF VARIABLES: 20

	MWUs	MCCUs	QTR1	QTR2	QTR3	QTR4	CENS	LARGE
MWUs	1.00000							
MCCUs	.98560	1.00000						
QTR1	-.04406	-.05823	1.00000					
QTR2	.01814	.03926	-.33333	1.00000				
QTR3	.01672	.01672	-.33333	-.33333	1.00000			
QTR4	.00920	.00225	-.33333	-.33333	-.33333	1.00000		
CENS	.79070	.76715	.00000	.00000	.00000	.00000	1.00000	
LARGE	.08817	.13902	.00000	.00000	.00000	.00000	-.33466	1.00000
MED	-.28397	-.27977	.00000	.00000	.00000	.00000	-.25371	-.36389
SMALL	-.52704	-.56376	.00000	.00000	.00000	.00000	-.29397	-.42164
AD	.63398	.70614	.00292	-.00346	-.00346	.00399	.25965	.37391
DEP	.66313	.73182	-.02365	.00735	.00735	.00894	.27035	.31673
TOTBEN	.69249	.75123	-.01805	.00490	.00490	.00826	.39682	.26577
OTHBEN	.43831	.44968	-.02066	.00681	.00681	.00704	.43328	.00903
OPERBEDS	.96543	.92776	.01071	.01071	-.01125	-.01017	.86402	-.01621
PHYHRS	.97070	.93836	.00000	.00000	.00000	.00000	.83274	-.00759
DCPHRS	.91959	.86771	.00000	.00000	.00000	.00000	.64294	.17663
RNHRS	.96626	.94636	.00000	.00000	.00000	.00000	.87221	.00862
PARAHRS	.97852	.97171	.00000	.00000	.00000	.00000	.78615	.08953
TOTHRS	.97578	.93670	.00000	.00000	.00000	.00000	.81988	.01386

	MED	SMALL	AD	DEP	TOTBEN	OTHBEN	OPERBEDS	PHYHRS
MED	1.00000							
SMALL	-.31964	1.00000						
AD	-.21265	-.42601	1.00000					
DEP	-.23038	-.35873	.93514	1.00000				
TOTBEN	-.29644	-.35533	.85857	.92166	1.00000			
OTHBEN	-.28283	-.12947	.27242	.40363	.71052	1.00000		
OPERBEDS	-.27650	-.48860	.49437	.49558	.53781	.35684	1.00000	
PHYHRS	-.27636	-.47022	.52167	.56502	.62060	.45608	.97060	1.00000
DCPHRS	-.28122	-.49253	.53036	.55191	.56024	.32675	.90910	.90009
RNHRS	-.27848	-.52016	.55285	.54573	.58939	.38002	.98458	.97191
PARAHRS	-.26547	-.54162	.65388	.67441	.68179	.38852	.95663	.95927
TOTHRS	-.27439	-.48333	.53827	.55548	.58370	.36964	.98892	.98238

	DCPHRS	RNHRS	PARAHRS	TOTHRS
DCPHRS	1.00000			
RNHRS	.88031	1.00000		
PARAHRS	.90426	.96426	1.00000	
TOTHRS	.93908	.97868	.97142	1.00000

CRITICAL VALUE (1-TAIL, .05) = + Or - .13578
CRITICAL VALUE (2-tail, .05) = +/- .16138

N = 148

APPENDIX M

---------------------- REGRESSION ANALYSIS ----------------------

DEPENDENT VARIABLE: MCCUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 132)	PROB.	PARTIAL r^2
PHYHRS	6.49153E-04	5.23789E-04	1.239	.21742	.0115
DCPHRS	-2.5679E-04	3.26797E-04	-.786	.43341	.0047
RNHRS	6.48552E-05	3.25061E-04	.200	.84217	3.01478E-04
PARAHRS	2.07762E-04	8.54537E-05	2.431	.01639	.0429
OPERBEDS	1.0511	.3799	2.767	.00647	.0548
AD	-.0012	.0021	-.566	.57213	.0024
DEP	.0116	.0020	5.912	.00000	.2093
OTHBEN	2.89015E-04	7.04853E-04	.410	.68244	.0013
CENS	162.1391	71.1428	2.279	.02427	.0379
LARGE	-1.0824E-09	5.21361E-04	-2.076E-06	1.00000	3.26508E-14
MED	-82.3064	24.4205	-3.370	.00098	.0792
SMALL	-174.9772	29.3625	-5.959	.00000	.2120
QTR1	-1157.0558	34682235.8445	-3.336E-05	.99997	8.43180E-12
QTR2	-1074.7261	34682235.8445	-3.099E-05	.99998	7.27457E-12
QTR3	-1089.6262	34682235.8445	-3.142E-05	.99997	7.47768E-12
QTR4	-1103.8553	34682235.8445	-3.183E-05	.99997	7.67425E-12
CONSTANT	1258.6379				

STD. ERROR OF EST. = 84.9538

ADJUSTED R SQUARED = .9758
R SQUARED = .9783
MULTIPLE R = .9891

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	42853375.2141	15	2856891.6809	395.848	1.900E-13
RESIDUAL	952663.1267	132	7217.1449		
TOTAL	43806038.3407	147			

1. PHYHRS = 462047
2. DCPHRS = 420551
3. RNHRS = 927984
4. PARAHRS = 2466851
5. OPERBEDS = 758
6. AD = 20852
7. DEP = 35236
8. OTHBEN = 25352
9. CENS = 1
10. LARGE = 0
11. MED = 0
12. SMALL = 0
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

CALCULATED Y VALUE = 2267.4652419459 ... RAMC

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

-------------------- REGRESSION ANALYSIS --------------------

:EADER DATA FOR: A:FINGMPOK   LABEL:
UMBER OF CASES: 148   NUMBER OF VARIABLES: 21

NDEX	NAME	MEAN	STD.DEV.
1	MCCUs	780.0182	545.8940
2	QUARTER	2.5000	1.1218
3	QTR1	.2500	.4345
4	QTR2	.2500	.4345
5	QTR3	.2500	.4345
6	QTR4	.2500	.4345
7	CENS	.1892	.3930
8	LARGE	.3243	.4697
9	MED	.2162	.4131
10	SMALL	.2703	.4456
11	AD	17559.2230	12372.2983
12	DEP	23464.6014	14715.6290
13	TOTBEN	66492.4865	35483.7679
14	OTHBEN	25468.6622	15901.7240
15	OPERBEDS	157.3311	158.9491
16	PHYHRS	120097.5946	90883.9290
17	DCPHRS	99523.2432	76168.9431
18	RNHRS	259629.6757	209592.9273
19	PARAHRS	811736.6486	529024.6568
20	TOTHRS	2087911.2162	1580993.9599
)EP. VAR.:	MWUs	5147.5642	3820.8534

)EPENDENT VARIABLE: MWUs

/AR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 143)	PROB.	PARTIAL r^2
?HYHRS	.0114	.0027	4.232	.00004	.1113
)CPHRS	.0068	.0017	4.100	.00007	.1052
₹NHRS	.0023	.0012	1.899	.05955	.0246
?ARAHRS	.0034	4.21142E-04	8.120	.00000	.3156
:ONSTANT	-275.2687				

;TD. ERROR OF EST. = 627.1492

\DJUSTED R SQUARED = .9731
R SQUARED = .9738
MULTIPLE R = .9868

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	2089797154.2361	4	522449288.5590	1328.319	.000E+00
RESIDUAL	56244200.3038	143	393316.0860		
TOTAL	2146041354.5399	147			

---------------------- REGRESSION ANALYSIS ----------------------

DEPENDENT VARIABLE: MWUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 142)	PROB.	PARTIAL r^2
PHYHRS	.0111	.0028	4.038	.00009	.1030
OCPHRS	.0063	.0019	3.392	.00090	.0750
RNHRS	.0015	.0018	.867	.38762	.0053
PARAHRS	.0035	4.25707E-04	8.108	.00000	.3164
OPERBEDS	1.2781	2.2169	.577	.56517	.0023
CONSTANT	-223.1058				

STD. ERROR OF EST. = 628.6183

ADJUSTED R SQUARED = .9729
R SQUARED = .9739
MULTIPLE R = .9868

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	2089928497.6827	5	417985699.5365	1057.761	7.000E-14
RESIDUAL	56112856.8572	142	395160.9638		
TOTAL	2146041354.5399	147			

---------------------- REGRESSION ANALYSIS ----------------------

DEPENDENT VARIABLE: MWUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 139)	PROB.	PARTIAL r^2
PHYHRS	.0062	.0028	2.208	.02890	.0339
DCPHRS	.0054	.0015	3.539	.00055	.0827
RNHRS	.0011	.0016	.700	.48532	.0035
PARAHRS	8.69266E-04	4.79512E-04	1.813	.07202	.0231
OPERBEDS	10.9244	2.0973	5.209	.00000	.1633
AD	-.0063	.0121	-.518	.60550	.0019
DEP	.0482	.0113	4.245	.00004	.1148
OTHBEN	.0082	.0034	2.422	.01674	.0405
CONSTANT	-80.3879				

STD. ERROR OF EST. = 506.0401

ADJUSTED R SQUARED = .9825
R SQUARED = .9834
MULTIPLE R = .9917

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	2110446707.3042	8	263805838.4130	1030.183	.000E+00
RESIDUAL	35594647.2357	139	256076.5988		
TOTAL	2146041354.5399	147			

---------------------- REGRESSION ANALYSIS ----------------------

DEPENDENT VARIABLE: MWUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 136)	PROB.	PARTIAL r^2
PHYHRS	.0086	.0031	2.824	.00545	.0554
DCPHRS	.0052	.0019	2.732	.00712	.0520
RNHRS	-7.8649E-04	.0019	-.417	.67766	.0013
PARAHRS	4.20539E-04	4.97786E-04	.845	.39970	.0052
OPERBEDS	12.0150	2.1907	5.485	.00000	.1811
AD	-.0103	.0124	-.834	.40570	.0051
DEP	.0562	.0114	4.919	.00000	.1511
OTHBEN	.0052	.0041	1.266	.20758	.0117
CENS	-7.5214E-08	.0029	-2.568E-05	.99998	4.84778E-12
LARGE	-327.0492	414.3483	-.789	.43130	.0046
MED	-485.0756	472.6587	-1.026	.30659	.0077
SMALL	-805.8736	517.0553	-1.559	.12142	.0175
CONSTANT	728.8757				

STD. ERROR OF EST. = 495.1359

ADJUSTED R SQUARED = .9832
R SQUARED = .9845
MULTIPLE R = .9922

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	2112699649.7051	11	192063604.5187	783.423	7.000E-14
RESIDUAL	33341704.8348	136	245159.5944		
TOTAL	2146041354.5399	147			

--------------------- REGRESSION ANALYSIS ---------------------

DEPENDENT VARIABLE: MWUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 133)	PROB.	PARTIAL r^2
PHYHRS	.0090	.0029	3.105	.00232	.0676
DCPHRS	.0048	.0018	2.671	.00851	.0509
RNHRS	-.0014	.0018	-.757	.45052	.0043
PARAHRS	4.41992E-04	4.70359E-04	.940	.34908	.0066
OPERBEDS	12.7165	2.0908	6.082	.00000	.2176
AD	-.0060	.0117	-.512	.60920	.0020
DEP	.0526	.0108	4.863	.00000	.1510
OTHBEN	.0054	.0039	1.397	.16481	.0145
CENS	-7.1608E-08	.0027	-2.626E-05	.99998	5.18594E-12
LARGE	-301.8194	391.5884	-.771	.44222	.0044
MED	-462.7530	446.6035	-1.036	.30201	.0080
SMALL	-780.6593	488.4841	-1.598	.11239	.0188
QTR1	-376.6262	109.4317	-3.442	.00077	.0818
QTR2	-12.7148	109.3870	-.116	.90764	1.01576E-04
QTR3	54.5359	108.7289	.502	.61679	.0019
QTR4	-7.2500E-08	4.67608E-04	-1.550E-04	.99988	1.80743E-10
CONSTANT	811.7068				

STD. ERROR OF EST. = 467.6076

ADJUSTED R SQUARED = .9850
R SQUARED = .9864
MULTIPLE R = .9932

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	2116959990.8598	14	151211427.9186	691.547	.000E+00
RESIDUAL	29081363.6801	133	218656.8698		
TOTAL	2146041354.5399	147			

---------------------- REGRESSION ANALYSIS ----------------------

HEADER DATA FOR: A:FINGMPOK   LABEL:
NUMBER OF CASES: 148   NUMBER OF VARIABLES: 21

INDEX	NAME	MEAN	STD.DEV.
1	MWUs	5147.5642	3820.8534
2	QUARTER	2.5000	1.1218
3	QTR1	.2500	.4345
4	QTR2	.2500	.4345
5	QTR3	.2500	.4345
6	QTR4	.2500	.4345
7	CENS	.1892	.3930
8	LARGE	.3243	.4697
9	MED	.2162	.4131
10	SMALL	.2703	.4456
11	AD	17559.2230	12372.2983
12	DEP	23464.6014	14715.6290
13	TOTBEN	66492.4865	35483.7679
14	OTHBEN	25468.6622	15901.7240
15	OPERBEDS	157.3311	158.9491
16	PHYHRS	120097.5946	90883.9290
17	DCPHRS	99523.2432	76168.9431
18	RNHRS	259629.6757	209592.9273
19	PARAHRS	811736.6486	529024.6568
20	TOTHRS	2087911.2162	1580993.9599
DEP. VAR.:	MCCUs	780.0182	545.8940

DEPENDENT VARIABLE: MCCUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 143)	PROB.	PARTIAL r^2
PHYHRS	2.39148E-04	5.52173E-04	.433	.66559	.0013
DCPHRS	-5.2029E-04	3.40519E-04	-1.528	.12874	.0161
RNHRS	3.01183E-04	2.46410E-04	1.222	.22361	.0103
PARAHRS	9.15964E-04	8.60884E-05	10.640	.00000	.4419
CONSTANT	-18.6394				

STD. ERROR OF EST. = 128.1997

ADJUSTED R SQUARED = .9448
R SQUARED = .9463
MULTIPLE R = .9728

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	41455811.5912	4	10363952.8978	630.597	.000E+00
RESIDUAL	2350226.7495	143	16435.1521		
TOTAL	43806038.3407	147			

--------------------- REGRESSION ANALYSIS ---------------------

DEPENDENT VARIABLE: MCCUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 142)	PROB.	PARTIAL r^2
PHYHRS	5.31987E-04	5.48758E-04	.969	.33397	.0066
DCPHRS	-4.3453E-05	3.72339E-04	-.117	.90726	9.59032E-05
RNHRS	.0010	3.53541E-04	2.935	.00389	.0572
PARAHRS	8.84803E-04	8.47465E-05	10.441	.00000	.4343
OPERBEDS	-1.2542	.4413	-2.842	.00514	.0538
CONSTANT	-69.8283				

STD. ERROR OF EST. = 125.1406

ADJUSTED R SQUARED = .9474
R SQUARED = .9492
MULTIPLE R = .9743

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	41582295.7537	5	8316459.1507	531.058	.000E+00
RESIDUAL	2223742.5870	142	15660.1591		
TOTAL	43806038.3407	147			

---------------------- REGRESSION ANALYSIS ----------------------

DEPENDENT VARIABLE: MCCUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 139)	PROB.	PARTIAL r^2
PHYHRS	-4.5041E-04	5.50058E-04	-.819	.41427	.0048
DCPHRS	-2.3395E-04	2.99886E-04	-.780	.43664	.0044
RNHRS	9.32517E-04	3.09361E-04	3.014	.00306	.0614
PARAHRS	3.55975E-04	9.36936E-05	3.799	.00022	.0941
OPERBEDS	.7287	.4098	1.778	.07758	.0222
AD	-9.7922E-04	.0024	-.414	.67954	.0012
DEP	.0096	.0022	4.344	.00003	.1195
OTHBEN	.0017	6.61954E-04	2.594	.01051	.0462
CONSTANT	-40.7994				

STD. ERROR OF EST. = 98.8772

ADJUSTED R SQUARED = .9672
R SQUARED = .9690
MULTIPLE R = .9844

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	42447078.1599	8	5305884.7700	542.708	.000E+00
RESIDUAL	1358960.1809	139	9776.6919		
TOTAL	43806038.3407	147			

---------------------- REGRESSION ANALYSIS ----------------------

DEPENDENT VARIABLE: MCCUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 136)	PROB.	PARTIAL r^2
PHYHRS	5.65000E-04	5.52513E-04	1.023	.30831	.0076
DCPHRS	-2.2702E-04	3.43908E-04	-.660	.51030	.0032
RNHRS	1.38128E-04	3.41994E-04	.404	.68693	.0012
PARAHRS	1.99843E-04	9.01668E-05	2.216	.02833	.0349
OPERBEDS	1.0113	.3968	2.549	.01193	.0456
AD	-.0020	.0022	-.901	.36922	.0059
DEP	.0124	.0021	5.973	.00000	.2078
OTHBEN	2.76337E-04	7.43906E-04	.371	.71087	.0010
CENS	162.2193	75.0532	2.161	.03242	.0332
LARGE	-5.8130E-09	5.52866E-04	-1.051E-05	.99999	8.12866E-13
MED	-81.9326	25.7806	-3.178	.00184	.0691
SMALL	-175.5172	30.9964	-5.662	.00000	.1908
CONSTANT	150.6197				

STD. ERROR OF EST. = 89.6868

ADJUSTED R SQUARED = .9730
R SQUARED = .9750
MULTIPLE R = .9874

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	42712093.1996	11	3882917.5636	482.727	.000E+00
RESIDUAL	1093945.1411	136	8043.7143		
TOTAL	43806038.3407	147			

---------------------- REGRESSION ANALYSIS ----------------------

DEPENDENT VARIABLE: MCCUs

VAR.	REGRESSION COEFFICIENT	STD. ERROR	T(DF= 132)	PROB.	PARTIAL r^2
PHYHRS	6.49153E-04	5.23789E-04	1.239	.21742	.0115
DCPHRS	-2.5679E-04	3.26797E-04	-.786	.43341	.0047
RNHRS	6.48552E-05	3.25061E-04	.200	.84217	3.01478E-04
PARAHRS	2.07762E-04	8.54537E-05	2.431	.01639	.0429
OPERBEDS	1.0511	.3799	2.767	.00647	.0548
AD	-.0012	.0021	-.566	.57213	.0024
DEP	.0116	.0020	5.912	.00000	.2093
OTHBEN	2.89015E-04	7.04853E-04	.410	.68244	.0013
CENS	162.1391	71.1428	2.279	.02427	.0379
LARGE	-1.0824E-09	5.21361E-04	-2.076E-06	1.00000	3.26508E-14
MED	-82.3064	24.4205	-3.370	.00098	.0792
SMALL	-174.9772	29.3625	-5.959	.00000	.2120
QTR1	-1157.0558	34682235.8445	-3.336E-05	.99997	8.43180E-12
QTR2	-1074.7261	34682235.8445	-3.099E-05	.99998	7.27457E-12
QTR3	-1089.6262	34682235.8445	-3.142E-05	.99997	7.47768E-12
QTR4	-1103.8553	34682235.8445	-3.183E-05	.99997	7.67425E-12
CONSTANT	1258.6379				

STD. ERROR OF EST. = 84.9538

ADJUSTED R SQUARED = .9758
R SQUARED = .9783
MULTIPLE R = .9891

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO	PROB.
REGRESSION	42853375.2141	15	2856891.6809	395.848	1.900E-13
RESIDUAL	952663.1267	132	7217.1449		
TOTAL	43806038.3407	147			

F DISTRIBUTION

D.F. NUMERATOR = 4
D.F. DENOMINATOR = 143

F = 1328
P = 1, 1-P = 0

F DISTRIBUTION

D.F. NUMERATOR = 1
D.F. DENOMINATOR = 142

F = .54
P = .5364, 1-P = .4636

F DISTRIBUTION

D.F. NUMERATOR = 3
D.F. DENOMINATOR = 139

F = 26.52
P = .99999999999969,   1-P = .00000000000031

F DISTRIBUTION

D.F. NUMERATOR = 3
D.F. DENOMINATOR = 136

F = 3.28
P = .9770, 1-P = .0230

F DISTRIBUTION

```
 D.F.   NUMERATOR = 3
 D.F. DENOMINATOR = 133

   F = 6.19
   P = .9994,   1-P = .0006
```

F DISTRIBUTION

```
 D.F.   NUMERATOR = 4
 D.F. DENOMINATOR = 143

   F = 630
   P = 1,   1-P = 0
```

F DISTRIBUTION

```
 D.F.   NUMERATOR = 1
 D.F. DENOMINATOR = 142

   F = 8.1
   P = .9949,   1-P = .0051
```

F DISTRIBUTION

D.F. NUMERATOR = 3
D.F. DENOMINATOR = 139

F = 29.6
P = .99999999999986, 1-P = .00000000000014

F DISTRIBUTION

D.F.   NUMERATOR = 3
D.F. DENOMINATOR = 136

F = 10.88
P = .9999981190294,   1-P = .0000018809706

F DISTRIBUTION

D.F. NUMERATOR = 3
D.F. DENOMINATOR = 133

F = 6.74
P = .9997, 1-P = .0003

APPENDIX N

```
  1. PHYHRS   = 213500
  2. DCPHRS   = 110392
  3. RNHRS    = 483745
  4. PARAHRS  = 1075038
  5. OPERBEDS = 310
  6. AD       = 6012
  7. DEP      = 10166
  8. OTHBEN   = 38488
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1127.2756738296


OPTIONS:   A. REPEAT OUTPUT
           B. ANOTHER COMPUTATION
           C. [Terminate]

ENTER: OPTION:
  1. PHYHRS   = 213500
  2. DCPHRS   = 110392
  3. RNHRS    = 483745
  4. PARAHRS  = 1075038
  5. OPERBEDS = 310
  6. AD       = 6012
  7. DEP      = 10166
  8. OTHBEN   = 38488
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1127.2756738296  LETTR


OPTIONS:   A. REPEAT OUTPUT
           B. ANOTHER COMPUTATION
           C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

```
  1. PHYHRS   = 213500
  2. DCPHRS   = 110392
  3. RNHRS    = 483745
  4. PARAHRS  = 1075038
  5. OPERBEDS = 310
  6. AD       = 6012
  7. DEP      = 10166
  8. OTHBEN   = 38488
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1127.2756738296
  1. PHYHRS   = 228567
  2. DCPHRS   = 197996
  3. RNHRS    = 576267
  4. PARAHRS  = 1329382
  5. OPERBEDS = 448
  6. AD       = 15451
  7. DEP      = 14398
  8. OTHBEN   = 42255
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1357.3385693529   FITZ

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 228567
  2. DCPHRS    = 197996
  3. RNHRS     = 576267
  4. PARAHRS   = 1329382
  5. OPERBEDS  = 448
  6. AD        = 15451
  7. DEP       = 14398
  8. OTHBEN    = 42255
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 1357.3385693529
  1. PHYHRS    = 234111
  2. DCPHRS    = 162205
  3. RNHRS     = 560468
  4. PARAHRS   = 1618298
  5. OPERBEDS  = 373
  6. AD        = 17172
  7. DEP       = 22414
  8. OTHBEN    = 46350
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 1442.5515370658   GORDON

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 234111
  2. DCPHRS   = 162205
  3. RNHRS    = 560468
  4. PARAHRS  = 1618298
  5. OPERBEDS = 373
  6. AD       = 17172
  7. DEP      = 22414
  8. OTHBEN   = 46350
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1442.5515370658
  1. PHYHRS   = 267900
  2. DCPHRS   = 195289
  3. RNHRS    = 735082
  4. PARAHRS  = 1871756
  5. OPERBEDS = 487
  6. AD       = 62096
  7. DEP      = 63445
  8. OTHBEN   = 26138
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 2056.5693491682  TRIPL

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 267900
  2. DCPHRS   = 195289
  3. RNHRS    = 735082
  4. PARAHRS  = 1871756
  5. OPERBEDS = 487
  6. AD       = 62096
  7. DEP      = 63445
  8. OTHBEN   = 26138
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 2056.5693491682
  1. PHYHRS   = 291624
  2. DCPHRS   = 150124
  3. RNHRS    = 604264
  4. PARAHRS  = 1639339
  5. OPERBEDS = 370
  6. AD       = 29888
  7. DEP      = 46233
  8. OTHBEN   = 61692
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1752.9253508796 MADGN

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 291624
  2. DCPHRS    = 150124
  3. RNHRS     = 604264
  4. PARAHRS   = 1639339
  5. OPERBEDS  = 370
  6. AD        = 29888
  7. DEP       = 46233
  8. OTHBEN    = 61692
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 1752.9253508796
  1. PHYHRS    = 235967
  2. DCPHRS    = 167378
  3. RNHRS     = 569795
  4. PARAHRS   = 1687963
  5. OPERBEDS  = 396
  6. AD        = 20846
  7. DEP       = 27928
  8. OTHBEN    = 32870
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 1537.4285265185 WBAMC

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 235967
  2. DCPHRS   = 167378
  3. RNHRS    = 569795
  4. PARAHRS  = 1687963
  5. OPERBEDS = 396
  6. AD       = 20846
  7. DEP      = 27928
  8. OTHBEN   = 32870
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1537.4285265185
  1. PHYHRS   = 93497
  2. DCPHRS   = 59265
  3. RNHRS    = 190834
  4. PARAHRS  = 593834
  5. OPERBEDS = 107
  6. AD       = 17052
  7. DEP      = 21095
  8. OTHBEN   = 33337
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 680.21504279742
```
DIXNJ

```
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 93497
  2. DCPHRS   = 59265
  3. RNHRS    = 190834
  4. PARAHRS  = 593834
  5. OPERBEDS = 107
  6. AD       = 17052
  7. DEP      = 21095
  8. OTHBEN   = 33337
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 680.21504279742
  1. PHYHRS   = 134596
  2. DCPHRS   = 96233
  3. RNHRS    = 281272
  4. PARAHRS  = 1017199
  5. OPERBEDS = 213
  6. AD       = 26587
  7. DEP      = 26063
  8. OTHBEN   = 25344
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 946.56323418575 BENNG


OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 134596
  2. DCPHRS   = 96233
  3. RNHRS    = 281272
  4. PARAHRS  = 1017199
  5. OPERBEDS = 213
  6. AD       = 26587
  7. DEP      = 26063
  8. OTHBEN   = 25344
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 946.56323418575
  1. PHYHRS   = 99770
  2. DCPHRS   = 71955
  3. RNHRS    = 313959
  4. PARAHRS  = 656982
  5. OPERBEDS = 150
  6. AD       = 13064
  7. DEP      = 11237
  8. OTHBEN   = 1180
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 628.29546262386 GORGA

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 99770
  2. DCPHRS    = 71955
  3. RNHRS     = 313959
  4. PARAHRS   = 656982
  5. OPERBEDS  = 150
  6. AD        = 13064
  7. DEP       = 11237
  8. OTHBEN    = 1180
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 628.29546262386
  1. PHYHRS    = 86207
  2. DCPHRS    = 119476
  3. RNHRS     = 252773
  4. PARAHRS   = 629915
  5. OPERBEDS  = 135
  6. AD        = 15167
  7. DEP       = 12285
  8. OTHBEN    = 22479
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 597.72775542978 JAKSN

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 86207
  2. DCPHRS    = 119476
  3. RNHRS     = 252773
  4. PARAHRS   = 629915
  5. OPERBEDS  = 135
  6. AD        = 15167
  7. DEP       = 12285
  8. OTHBEN    = 22479
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 597.72775542978
  1. PHYHRS    = 137120
  2. DCPHRS    = 137211
  3. RNHRS     = 258635
  4. PARAHRS   = 846591
  5. OPERBEDS  = 125
  6. AD        = 22514
  7. DEP       = 27155
  8. OTHBEN    = 19303
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 824.12280787597 FTORD

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

```
  1. PHYHRS    = 137120
  2. DCPHRS    = 137211
  3. RNHRS     = 258635
  4. PARAHRS   = 846591
  5. OPERBEDS  = 125
  6. AD        = 22514
  7. DEP       = 27155
  8. OTHBEN    = 19303
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25
```

CALCULATED Y VALUE = 824.12280787597

```
  1. PHYHRS    = 106871
  2. DCPHRS    = 154827
  3. RNHRS     = 258022
  4. PARAHRS   = 871474
  5. OPERBEDS  = 144
  6. AD        = 23104
  7. DEP       = 31065
  8. OTHBEN    = 13712
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25
```

CALCULATED Y VALUE = 868.17056726832 CAmPB

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 106871
  2. DCPHRS   = 154827
  3. RNHRS    = 258022
  4. PARAHRS  = 871474
  5. OPERBEDS = 144
  6. AD       = 23104
  7. DEP      = 31065
  8. OTHBEN   = 13712
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 868.17056726832
  1. PHYHRS   = 97132
  2. DCPHRS   = 167652
  3. RNHRS    = 211600
  4. PARAHRS  = 911283
  5. OPERBEDS = 169
  6. AD       = 23313
  7. DEP      = 32461
  8. OTHBEN   = 38655
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 913.27096820565 KNOXX

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 97132
  2. DCPHRS   = 167652
  3. RNHRS    = 211600
  4. PARAHRS  = 911283
  5. OPERBEDS = 169
  6. AD       = 23313
  7. DEP      = 32461
  8. OTHBEN   = 38655
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 913.27096820565
  1. PHYHRS   = 86723
  2. DCPHRS   = 96107
  3. RNHRS    = 231453
  4. PARAHRS  = 673388
  5. OPERBEDS = 120
  6. AD       = 19412
  7. DEP      = 29087
  8. OTHBEN   = 22720
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 786.13673818473 CARSN

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 86723
  2. DCPHRS   = 96107
  3. RNHRS    = 231453
  4. PARAHRS  = 673388
  5. OPERBEDS = 120
  6. AD       = 19412
  7. DEP      = 29087
  8. OTHBEN   = 22720
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 786.13673818473
  1. PHYHRS   = 106791
  2. DCPHRS   = 134068
  3. RNHRS    = 216518
  4. PARAHRS  = 893186
  5. OPERBEDS = 153
  6. AD       = 20133
  7. DEP      = 23009
  8. OTHBEN   = 40152
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 802.34163490396 LWOOD

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 106791
  2. DCPHRS   = 134068
  3. RNHRS    = 216518
  4. PARAHRS  = 893186
  5. OPERBEDS = 153
  6. AD       = 20133
  7. DEP      = 23009
  8. OTHBEN   = 40152
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 802.34163490396
  1. PHYHRS   = 181789
  2. DCPHRS   = 193657
  3. RNHRS    = 398627
  4. PARAHRS  = 1436467
  5. OPERBEDS = 238
  6. AD       = 50374
  7. DEP      = 56794
  8. OTHBEN   = 30862
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1403.1849681356 BRAGG

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

   1. PHYHRS   = 181789
   2. DCPHRS   = 193657
   3. RNHRS    = 398627
   4. PARAHRS  = 1436467
   5. OPERBEDS = 238
   6. AD       = 50374
   7. DEP      = 56794
   8. OTHBEN   = 30862
   9. CENS     = 0
  10. LARGE    = 1
  11. MED      = 0
  12. SMALL    = 0
  13. QTR1     = .25
  14. QTR2     = .25
  15. QTR3     = .25
  16. QTR4     = .25

CALCULATED Y VALUE = 1403.1849681356
   1. PHYHRS   = 126799
   2. DCPHRS   = 90492
   3. RNHRS    = 208685
   4. PARAHRS  = 785842
   5. OPERBEDS = 131
   6. AD       = 21516
   7. DEP      = 24863
   8. OTHBEN   = 23113
   9. CENS     = 0
  10. LARGE    = 1
  11. MED      = 0
  12. SMALL    = 0
  13. QTR1     = .25
  14. QTR2     = .25
  15. QTR3     = .25
  16. QTR4     = .25

CALCULATED Y VALUE = 795.53706330751
```
F SILL

```
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 126799
  2. DCPHRS    = 90492
  3. RNHRS     = 208685
  4. PARAHRS   = 785842
  5. OPERBEDS  = 131
  6. AD        = 21516
  7. DEP       = 24863
  8. OTHBEN    = 23113
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 795.53706330751
  1. PHYHRS    = 171967
  2. DCPHRS    = 105578
  3. RNHRS     = 324351
  4. PARAHRS   = 1242238
  5. OPERBEDS  = 201
  6. AD        = 38411
  7. DEP       = 53661
  8. OTHBEN    = 28078
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 1312.5800308263 FHOOD

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

   1. PHYHRS    = 171967
   2. DCPHRS    = 105578
   3. RNHRS     = 324351
   4. PARAHRS   = 1242238
   5. OPERBEDS  = 201
   6. AD        = 38411
   7. DEP       = 53661
   8. OTHBEN    = 28078
   9. CENS      = 0
  10. LARGE     = 1
  11. MED       = 0
  12. SMALL     = 0
  13. QTR1      = .25
  14. QTR2      = .25
  15. QTR3      = .25
  16. QTR4      = .25

CALCULATED Y VALUE = 1312.5800308263
   1. PHYHRS    = 53737
   2. DCPHRS    = 53873
   3. RNHRS     = 104469
   4. PARAHRS   = 507231
   5. OPERBEDS  = 53
   6. AD        = 9614
   7. DEP       = 10562
   8. OTHBEN    = 18539
   9. CENS      = 0
  10. LARGE     = 0
  11. MED       = 1
  12. SMALL     = 0
  13. QTR1      = .25
  14. QTR2      = .25
  15. QTR3      = .25
  16. QTR4      = .25

CALCULATED Y VALUE = 375.42803010282 FT LEE

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 53737
  2. DCPHRS   = 53873
  3. RNHRS    = 104469
  4. PARAHRS  = 507231
  5. OPERBEDS = 53
  6. AD       = 9614
  7. DEP      = 10562
  8. OTHBEN   = 18539
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 375.42803010282
  1. PHYHRS   = 42275
  2. DCPHRS   = 56341
  3. RNHRS    = 110006
  4. PARAHRS  = 396092
  5. OPERBEDS = 61
  6. AD       = 9496
  7. DEP      = 8204
  8. OTHBEN   = 10646
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 323.49223212277 MCLN


OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

```
  1. PHYHRS   = 42275
  2. DCPHRS   = 56341
  3. RNHRS    = 110006
  4. PARAHRS  = 396092
  5. OPERBEDS = 61
  6. AD       = 9496
  7. DEP      = 8204
  8. OTHBEN   = 10646
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25
```

CALCULATED Y VALUE = 323.49223212277

```
  1. PHYHRS   = 64195
  2. DCPHRS   = 49859
  3. RNHRS    = 85835
  4. PARAHRS  = 364261
  5. OPERBEDS = 48
  6. AD       = 12362
  7. DEP      = 14679
  8. OTHBEN   = 14047
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25
```

CALCULATED Y VALUE = 390.30773390785 EUSTI

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

OBSERVED Xi VALUE(S):

```
  1. PHYHRS   = 64195
  2. DCPHRS   = 49859
  3. RNHRS    = 85835
  4. PARAHRS  = 364261
  5. OPERBEDS = 48
  6. AD       = 12362
  7. DEP      = 14679
  8. OTHBEN   = 14047
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 390.30773390785
  1. PHYHRS   = 88630
  2. DCPHRS   = 76198
  3. RNHRS    = 201190
  4. PARAHRS  = 833465
  5. OPERBEDS = 90
  6. AD       = 18569
  7. DEP      = 26256
  8. OTHBEN   = 11157
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 674.72147110166 STWRT

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

   1. PHYHRS   = 88630
   2. DCPHRS   = 76198
   3. RNHRS    = 201190
   4. PARAHRS  = 833465
   5. OPERBEDS = 90
   6. AD       = 18569
   7. DEP      = 26256
   8. OTHBEN   = 11157
   9. CENS     = 0
  10. LARGE    = 0
  11. MED      = 1
  12. SMALL    = 0
  13. QTR1     = .25
  14. QTR2     = .25
  15. QTR3     = .25
  16. QTR4     = .25

CALCULATED Y VALUE = 674.72147110166
   1. PHYHRS   = 82273
   2. DCPHRS   = 97067
   3. RNHRS    = 176199
   4. PARAHRS  = 666270
   5. OPERBEDS = 111
   6. AD       = 15461
   7. DEP      = 24518
   8. OTHBEN   = 7305
   9. CENS     = 0
  10. LARGE    = 0
  11. MED      = 1
  12. SMALL    = 0
  13. QTR1     = .25
  14. QTR2     = .25
  15. QTR3     = .25
  16. QTR4     = .25

CALCULATED Y VALUE = 633.38989608112 RILEY

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 82273
  2. DCPHRS   = 97067
  3. RNHRS    = 176199
  4. PARAHRS  = 666270
  5. OPERBEDS = 111
  6. AD       = 15461
  7. DEP      = 24518
  8. OTHBEN   = 7305
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 633.38989608112
  1. PHYHRS   = 51829
  2. DCPHRS   = 29147
  3. RNHRS    = 115691
  4. PARAHRS  = 291900
  5. OPERBEDS = 56
  6. AD       = 6459
  7. DEP      = 5127
  8. OTHBEN   = 15080
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 279.33214407186 WSTPT

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 51829
  2. DCPHRS   = 29147
  3. RNHRS    = 115691
  4. PARAHRS  = 291900
  5. OPERBEDS = 56
  6. AD       = 6459
  7. DEP      = 5127
  8. OTHBEN   = 15080
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 279.33214407186
  1. PHYHRS   = 75427
  2. DCPHRS   = 45299
  3. RNHRS    = 185212
  4. PARAHRS  = 705439
  5. OPERBEDS = 85
  6. AD       = 15049
  7. DEP      = 20700
  8. OTHBEN   = 6174
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 579.43803370677 FPOLK


OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 75427
  2. DCPHRS   = 45299
  3. RNHRS    = 185212
  4. PARAHRS  = 705439
  5. OPERBEDS = 85
  6. AD       = 15049
  7. DEP      = 20700
  8. OTHBEN   = 6174
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 579.43803370677
  1. PHYHRS   = 121137
  2. DCPHRS   = 63242
  3. RNHRS    = 212411
  4. PARAHRS  = 597370
  5. OPERBEDS = 95
  6. AD       = 15834
  7. DEP      = 22612
  8. OTHBEN   = 46717
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 627.31400106119
```
BELVO

```
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 121137
  2. DCPHRS   = 63242
  3. RNHRS    = 212411
  4. PARAHRS  = 597370
  5. OPERBEDS = 95
  6. AD       = 15834
  7. DEP      = 22612
  8. OTHBEN   = 46717
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 627.31400106119
  1. PHYHRS   = 111868
  2. DCPHRS   = 90289
  3. RNHRS    = 148862
  4. PARAHRS  = 575281
  5. OPERBEDS = 43
  6. AD       = 22865
  7. DEP      = 35643
  8. OTHBEN   = 64513
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 606.3989414558 MEADE

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 111868
  2. DCPHRS   = 90289
  3. RNHRS    = 148862
  4. PARAHRS  = 575281
  5. OPERBEDS = 43
  6. AD       = 22865
  7. DEP      = 35643
  8. OTHBEN   = 64513
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 606.3989414558
  1. PHYHRS   = 53837
  2. DCPHRS   = 31024
  3. RNHRS    = 55485
  4. PARAHRS  = 327649
  5. OPERBEDS = 31
  6. AD       = 7078
  7. DEP      = 17078
  8. OTHBEN   = 33077
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 308.05361177019 DEVEN


OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 53837
  2. DCPHRS   = 31024
  3. RNHRS    = 55485
  4. PARAHRS  = 327649
  5. OPERBEDS = 31
  6. AD       = 7078
  7. DEP      = 17078
  8. OTHBEN   = 33077
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 308.05361177019
  1. PHYHRS   = 42760
  2. DCPHRS   = 29729
  3. RNHRS    = 103834
  4. PARAHRS  = 388946
  5. OPERBEDS = 55
  6. AD       = 7193
  7. DEP      = 10945
  8. OTHBEN   = 9689
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 264.12910613346 HUACH

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 42760
  2. DCPHRS    = 29729
  3. RNHRS     = 103834
  4. PARAHRS   = 388946
  5. OPERBEDS  = 55
  6. AD        = 7193
  7. DEP       = 10945
  8. OTHBEN    = 9689
  9. CENS      = 0
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 1
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 264.12910613346
  1. PHYHRS    = 64906
  2. DCPHRS    = 55630
  3. RNHRS     = 117587
  4. PARAHRS   = 471969
  5. OPERBEDS  = 42
  6. AD        = 8464
  7. DEP       = 12600
  8. OTHBEN    = 13292
  9. CENS      = 0
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 1
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 295.07079205655 RUCKR

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

```
 1. PHYHRS   = 64906
 2. DCPHRS   = 55630
 3. RNHRS    = 117587
 4. PARAHRS  = 471969
 5. OPERBEDS = 42
 6. AD       = 8464
 7. DEP      = 12600
 8. OTHBEN   = 13292
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

CALCULATED Y VALUE = 295.07079205655

```
 1. PHYHRS   = 47530
 2. DCPHRS   = 40919
 3. RNHRS    = 98437
 4. PARAHRS  = 549662
 5. OPERBEDS = 38
 6. AD       = 12910
 7. DEP      = 20492
 8. OTHBEN   = 5842
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

CALCULATED Y VALUE = 382.45502089997 ALASK

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 47530
  2. DCPHRS   = 40919
  3. RNHRS    = 98437
  4. PARAHRS  = 549662
  5. OPERBEDS = 38
  6. AD       = 12910
  7. DEP      = 20492
  8. OTHBEN   = 5842
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 382.45502089997
  1. PHYHRS   = 38016
  2. DCPHRS   = 24152
  3. RNHRS    = 74853
  4. PARAHRS  = 223256
  5. OPERBEDS = 27
  6. AD       = 3649
  7. DEP      = 7044
  8. OTHBEN   = 16013
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 157.51871334684 REDST


OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 38016
  2. DCPHRS   = 24152
  3. RNHRS    = 74853
  4. PARAHRS  = 223256
  5. OPERBEDS = 27
  6. AD       = 3649
  7. DEP      = 7044
  8. OTHBEN   = 16013
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 157.51871334684
  1. PHYHRS   = 45275
  2. DCPHRS   = 26154
  3. RNHRS    = 55807
  4. PARAHRS  = 211843
  5. OPERBEDS = 23
  6. AD       = 6222
  7. DEP      = 15321
  8. OTHBEN   = 45091
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 255.38621859965 MON NJ

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 45275
  2. DCPHRS   = 26154
  3. RNHRS    = 55807
  4. PARAHRS  = 211843
  5. OPERBEDS = 23
  6. AD       = 6222
  7. DEP      = 15321
  8. OTHBEN   = 45091
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 255.38621859965
  1. PHYHRS   = 45663
  2. DCPHRS   = 39184
  3. RNHRS    = 80893
  4. PARAHRS  = 317837
  5. OPERBEDS = 26
  6. AD       = 6506
  7. DEP      = 13274
  8. OTHBEN   = 17390
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 246.95933262332 LVNTH

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 45663
  2. DCPHRS    = 39184
  3. RNHRS     = 80893
  4. PARAHRS   = 317837
  5. OPERBEDS  = 26
  6. AD        = 6506
  7. DEP       = 13274
  8. OTHBEN    = 17390
  9. CENS      = 0
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 1
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 246.95933262332
  1. PHYHRS    = 25704
  2. DCPHRS    = 26334
  3. RNHRS     = 25820
  4. PARAHRS   = 168978
  5. OPERBEDS  = 5
  6. AD        = 4320
  7. DEP       = 6945
  8. OTHBEN    = 13782
  9. CENS      = 0
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 1
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 108.7807867524  BENHR

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

1.	PHYHRS	= 25704
2.	DCPHRS	= 26334
3.	RNHRS	= 25820
4.	PARAHRS	= 168978
5.	OPERBEDS	= 5
6.	AD	= 4320
7.	DEP	= 6945
8.	OTHBEN	= 13782
9.	CENS	= 0
10.	LARGE	= 0
11.	MED	= 0
12.	SMALL	= 1
13.	QTR1	= .25
14.	QTR2	= .25
15.	QTR3	= .25
16.	QTR4	= .25

CALCULATED Y VALUE = 108.7807867524

1.	PHYHRS	= 25571
2.	DCPHRS	= 17463
3.	RNHRS	= 49373
4.	PARAHRS	= 189736
5.	OPERBEDS	= 13
6.	AD	= 6984
7.	DEP	= 5370
8.	OTHBEN	= 822
9.	CENS	= 0
10.	LARGE	= 0
11.	MED	= 0
12.	SMALL	= 1
13.	QTR1	= .25
14.	QTR2	= .25
15.	QTR3	= .25
16.	QTR4	= .25

CALCULATED Y VALUE = 99.96222713759 I. RWCA

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

OBSERVED Xi VALUE(S): MWUs

1. PHYHRS = 25571
2. DCPHRS = 17463
3. RNHRS = 49373
4. PARAHRS = 189736
5. OPERBEDS = 13
6. AD = 6984
7. DEP = 5370
8. OTHBEN = 822
9. CENS = 0
10. LARGE = 0
11. MED = 0
12. SMALL = 1
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

CALCULATED Y VALUE = 99.96222713759

1. PHYHRS = 462047
2. DCPHRS = 420551
3. RNHRS = 927984
4. PARAHRS = 2466851
5. OPERBEDS = 758
6. AD = 20852
7. DEP = 35236
8. OTHBEN = 25352
9. CENS = 1
10. LARGE = 0
11. MED = 0
12. SMALL = 0
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

CALCULATED Y VALUE = 18224.219699289 WRAMC

x 4

72896

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

OBSERVED Xi VALUE(S):

1. PHYHRS = 462047
2. DCPHRS = 420551
3. RNHRS = 927984
4. PARAHRS = 2466851
5. OPERBEDS = 758
6. AD = 20852
7. DEP = 35236
8. OTHBEN = 25352
9. CENS = 1
10. LARGE = 0
11. MED = 0
12. SMALL = 0
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

CALCULATED Y VALUE = 18224.219699289

1. PHYHRS = 213500
2. DCPHRS = 110392
3. RNHRS = 483745
4. PARAHRS = 1075038
5. OPERBEDS = 310
6. AD = 6012
7. DEP = 10166
8. OTHBEN = 38488
9. CENS = 1
10. LARGE = 0
11. MED = 0
12. SMALL = 0
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

CALCULATED Y VALUE = 7639.4817495935 LETTR

x 4

30,558

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

```
OBSERVED Xi VALUE(S):

   1. PHYHRS   = 213500
   2. DCPHRS   = 110392
   3. RNHRS    = 483745
   4. PARAHRS  = 1075038
   5. OPERBEDS = 310
   6. AD       = 6012
   7. DEP      = 10166
   8. OTHBEN   = 38488
   9. CENS     = 1
  10. LARGE    = 0
  11. MED      = 0
  12. SMALL    = 0
  13. QTR1     = .25
  14. QTR2     = .25
  15. QTR3     = .25
  16. QTR4     = .25

CALCULATED Y VALUE = 7639.4817495935
   1. PHYHRS   = 228567
   2. DCPHRS   = 197996
   3. RNHRS    = 576267
   4. PARAHRS  = 1329382
   5. OPERBEDS = 448
   6. AD       = 15451
   7. DEP      = 14398
   8. OTHBEN   = 42255
   9. CENS     = 1
  10. LARGE    = 0
  11. MED      = 0
  12. SMALL    = 0
  13. QTR1     = .25
  14. QTR2     = .25
  15. QTR3     = .25
  16. QTR4     = .25

CALCULATED Y VALUE = 10123.646323407 FITZ
                              40,495
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 228567
  2. DCPHRS   = 197996
  3. RNHRS    = 576267
  4. PARAHRS  = 1329382
  5. OPERBEDS = 448
  6. AD       = 15451
  7. DEP      = 14398
  8. OTHBEN   = 42255
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 10123.646323407
  1. PHYHRS   = 234111
  2. DCPHRS   = 162205
  3. RNHRS    = 560468
  4. PARAHRS  = 1618298
  5. OPERBEDS = 373
  6. AD       = 17172
  7. DEP      = 22414
  8. OTHBEN   = 46350
  9. CENS     = 1
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 9630.3212831608 GORDN
                               38521

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 234111
  2. DCPHRS    = 162205
  3. RNHRS     = 560468
  4. PARAHRS   = 1618298
  5. OPERBEDS  = 373
  6. AD        = 17172
  7. DEP       = 22414
  8. OTHBEN    = 46350
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 9630.3212831608
  1. PHYHRS    = 267900
  2. DCPHRS    = 195289
  3. RNHRS     = 735082
  4. PARAHRS   = 1871756
  5. OPERBEDS  = 487
  6. AD        = 62096
  7. DEP       = 63445
  8. OTHBEN    = 26138
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 13196.619044641  TRIPL
                          52,787

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 267900
  2. DCPHRS    = 195289
  3. RNHRS     = 735082
  4. PARAHRS   = 1871756
  5. OPERBEDS  = 487
  6. AD        = 62096
  7. DEP       = 63445
  8. OTHBEN    = 26138
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 13196.619044641
  1. PHYHRS    = 291624
  2. DCPHRS    = 150124
  3. RNHRS     = 604264
  4. PARAHRS   = 1639339
  5. OPERBEDS  = 370
  6. AD        = 29888
  7. DEP       = 46233
  8. OTHBEN    = 61692
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 11259.095392294 MADGN
                        45,036.4

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 291624
  2. DCPHRS    = 150124
  3. RNHRS     = 604264
  4. PARAHRS   = 1639339
  5. OPERBEDS  = 370
  6. AD        = 29888
  7. DEP       = 46233
  8. OTHBEN    = 61692
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 11259.095392294
  1. PHYHRS    = 235967
  2. DCPHRS    = 167378
  3. RNHRS     = 569795
  4. PARAHRS   = 1687963
  5. OPERBEDS  = 396
  6. AD        = 20846
  7. DEP       = 27928
  8. OTHBEN    = 32870
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 10177.441628208 WBAMC
                               40,710

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 235967
  2. DCPHRS    = 167378
  3. RNHRS     = 569795
  4. PARAHRS   = 1687963
  5. OPERBEDS  = 396
  6. AD        = 20846
  7. DEP       = 27928
  8. OTHBEN    = 32870
  9. CENS      = 1
 10. LARGE     = 0
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 10177.441628208
  1. PHYHRS    = 93497
  2. DCPHRS    = 59265
  3. RNHRS     = 190834
  4. PARAHRS   = 593879
  5. OPERBEDS  = 107
  6. AD        = 17052
  7. DEP       = 21095
  8. OTHBEN    = 33337
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 4100.9444850794
```

OIXNS

16404

```
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 93497
  2. DCPHRS   = 59265
  3. RNHRS    = 190834
  4. PARAHRS  = 593879
  5. OPERBEDS = 107
  6. AD       = 17052
  7. DEP      = 21095
  8. OTHBEN   = 33337
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 4100.9444850794
  1. PHYHRS   = 134596
  2. DCPHRS   = 96233
  3. RNHRS    = 281272
  4. PARAHRS  = 1017199
  5. OPERBEDS = 213
  6. AD       = 26587
  7. DEP      = 26063
  8. OTHBEN   = 25344
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 6219.9272290899 BENNG
                               24880

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 134596
  2. DCPHRS    = 96233
  3. RNHRS     = 281272
  4. PARAHRS   = 1017199
  5. OPERBEDS  = 213
  6. AD        = 26587
  7. DEP       = 26063
  8. OTHBEN    = 25344
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 6219.9272290899
  1. PHYHRS    = 99770
  2. DCPHRS    = 71955
  3. RNHRS     = 313959
  4. PARAHRS   = 656982
  5. OPERBEDS  = 150
  6. AD        = 13064
  7. DEP       = 11237
  8. OTHBEN    = 1180
  9. CENS      = 0
 10. LARGE     = 1
 11. MED       = 0
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 3957.0586479986 GORGA
                          15828

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 99770
  2. DCPHRS   = 71955
  3. RNHRS    = 313959
  4. PARAHRS  = 656982
  5. OPERBEDS = 150
  6. AD       = 13064
  7. DEP      = 11237
  8. OTHBEN   = 1180
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 3957.0586479986
  1. PHYHRS   = 86207
  2. DCPHRS   = 119476
  3. RNHRS    = 252773
  4. PARAHRS  = 629915
  5. OPERBEDS = 135
  6. AD       = 15167
  7. DEP      = 12285
  8. OTHBEN   = 22479
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 4101.9858864864 JAKSN
                               12408

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

```
  1. PHYHRS   = 86207
  2. DCPHRS   = 119476
  3. RNHRS    = 252773
  4. PARAHRS  = 629915
  5. OPERBEDS = 135
  6. AD       = 15167
  7. DEP      = 12285
  8. OTHBEN   = 22479
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25
```

CALCULATED Y VALUE = 4101.9858864864

```
  1. PHYHRS   = 137120
  2. DCPHRS   = 137211
  3. RNHRS    = 258635
  4. PARAHRS  = 846591
  5. OPERBEDS = 125
  6. AD       = 22514
  7. DEP      = 27155
  8. OTHBEN   = 19303
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25
```

CALCULATED Y VALUE = 5324.755539937 FTORD

21300

```
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

```
 1. PHYHRS   = 137120
 2. DCPHRS   = 137211
 3. RNHRS    = 258635
 4. PARAHRS  = 846591
 5. OPERBEDS = 125
 6. AD       = 22514
 7. DEP      = 27155
 8. OTHBEN   = 19303
 9. CENS     = 0
10. LARGE    = 1
11. MED      = 0
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

CALCULATED Y VALUE = 5324.755539937

```
 1. PHYHRS   = 106871
 2. DCPHRS   = 154827
 3. RNHRS    = 258022
 4. PARAHRS  = 871474
 5. OPERBEDS = 144
 6. AD       = 23104
 7. DEP      = 31065
 8. OTHBEN   = 13712
 9. CENS     = 0
10. LARGE    = 1
11. MED      = 0
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

CALCULATED Y VALUE = 5563.3810669333 CAMPB

22,256

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

```
SERVED Xi VALUE(S):

 1. PHYHRS   = 106871
 2. DCPHRS   = 154827
 3. RNHRS    = 258022
 4. PARAHRS  = 871474
 5. OPERBEDS = 144
 6. AD       = 23104
 7. DEP      = 31065
 8. OTHBEN   = 13712
 9. CENS     = 0
.0. LARGE    = 1
.1. MED      = 0
.2. SMALL    = 0
.3. QTR1     = .25
.4. QTR2     = .25
.5. QTR3     = .25
.6. QTR4     = .25

LCULATED Y VALUE = 5563.8810669333
 1. PHYHRS   = 97132
 2. DCPHRS   = 167652
 3. RNHRS    = 211600
 4. PARAHRS  = 911283
 5. OPERBEDS = 169
 6. AD       = 23313
 7. DEP      = 32461
 8. OTHBEN   = 38655
 9. CENS     = 0
.0. LARGE    = 1
.1. MED      = 0
.2. SMALL    = 0
.3. QTR1     = .25
.4. QTR2     = .25
.5. QTR3     = .25
.6. QTR4     = .25

LCULATED Y VALUE = 6144.0244935001 KNOXX
                                24,576

TIONS:  A. REPEAT OUTPUT
        B. ANOTHER COMPUTATION
        C. [Terminate]

TER: OPTION:
```

BSERVED Xi VALUE(S):

1. PHYHRS = 97132
2. DCPHRS = 167652
3. RNHRS = 211600
4. PARAHRS = 911283
5. OPERBEDS = 169
6. AD = 23313
7. DEP = 32461
8. OTHBEN = 38655
9. CENS = 0
10. LARGE = 1
11. MED = 0
12. SMALL = 0
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

ALCULATED Y VALUE = 6144.0244935001

1. PHYHRS = 86723
2. DCPHRS = 96107
3. RNHRS = 231453
4. PARAHRS = 673388
5. OPERBEDS = 120
6. AD = 19412
7. DEP = 29087
8. OTHBEN = 22720
9. CENS = 0
10. LARGE = 1
11. MED = 0
12. SMALL = 0
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

ALCULATED Y VALUE = 4711.5384073558 CARSN

18,846

PTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

NTER: OPTION:

```
)BSERVED Xi VALUE(S):

  1. PHYHRS   = 86723
  2. DCPHRS   = 96107
  3. RNHRS    = 231453
  4. PARAHRS  = 673388
  5. OPERBEDS = 120
  6. AD       = 19412
  7. DEP      = 29087
  8. OTHBEN   = 22720
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

:ALCULATED Y VALUE = 4711.5384073558
  1. PHYHRS   = 106791
  2. DCPHRS   = 134068
  3. RNHRS    = 216518
  4. PARAHRS  = 893186
  5. OPERBEDS = 153
  6. AD       = 20133
  7. DEP      = 23009
  8. OTHBEN   = 40152
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

:ALCULATED Y VALUE = 5380.931412134 L WOOD
                                   21524
)PTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

:NTER: OPTION:
```

)BSERVED Xi VALUE(S):

```
 1. PHYHRS    = 106791
 2. DCPHRS    = 134068
 3. RNHRS     = 216518
 4. PARAHRS   = 893186
 5. OPERBEDS  = 153
 6. AD        = 20133
 7. DEP       = 23009
 8. OTHBEN    = 40152
 9. CENS      = 0
10. LARGE     = 1
11. MED       = 0
12. SMALL     = 0
13. QTR1      = .25
14. QTR2      = .25
15. QTR3      = .25
16. QTR4      = .25
```

:ALCULATED Y VALUE = 5380.931412134

```
 1. PHYHRS    = 181789
 2. DCPHRS    = 193657
 3. RNHRS     = 398627
 4. PARAHRS   = 1436467
 5. OPERBEDS  = 238
 6. AD        = 50374
 7. DEP       = 56794
 8. OTHBEN    = 30862
 9. CENS      = 0
10. LARGE     = 1
11. MED       = 0
12. SMALL     = 0
13. QTR1      = .25
14. QTR2      = .25
15. QTR3      = .25
16. QTR4      = .25
```

:ALCULATED Y VALUE = 8958.7974743088 BRAGG

35836

)PTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

OBSERVED Xi VALUE(S):

```
  1. PHYHRS   = 181789
  2. DCPHRS   = 193657
  3. RNHRS    = 398627
  4. PARAHRS  = 1436467
  5. OPERBEDS = 238
  6. AD       = 50374
  7. DEP      = 56794
  8. OTHBEN   = 30862
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25
```

CALCULATED Y VALUE = 8958.7974743088

```
  1. PHYHRS   = 126799
  2. DCPHRS   = 90492
  3. RNHRS    = 208685
  4. PARAHRS  = 785842
  5. OPERBEDS = 131
  6. AD       = 21516
  7. DEP      = 24863
  8. OTHBEN   = 23113
  9. CENS     = 0
 10. LARGE    = 1
 11. MED      = 0
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25
```

CALCULATED Y VALUE = 5031.03731728 FSILL

20124

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

OBSERVED Xi VALUE(S):

```
 1. PHYHRS    = 126799
 2. DCPHRS    = 90492
 3. RNHRS     = 208685
 4. PARAHRS   = 785842
 5. OPERBEDS  = 131
 6. AD        = 21516
 7. DEP       = 24863
 8. OTHBEN    = 23113
 9. CENS      = 0
10. LARGE     = 1
11. MED       = 0
12. SMALL     = 0
13. QTR1      = .25
14. QTR2      = .25
15. QTR3      = .25
16. QTR4      = .25
```

CALCULATED Y VALUE = 5031.03731728

```
 1. PHYHRS    = 171967
 2. DCPHRS    = 105578
 3. RNHRS     = 324351
 4. PARAHRS   = 1242238
 5. OPERBEDS  = 201
 6. AD        = 38411
 7. DEP       = 53661
 8. OTHBEN    = 120150
 9. CENS      = 0
10. LARGE     = 1
11. MED       = 0
12. SMALL     = 0
13. QTR1      = .25
14. QTR2      = .25
15. QTR3      = .25
16. QTR4      = .25
```

CALCULATED Y VALUE = 8382.7945554613 FHOOD

33,532

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

OBSERVED Xi VALUE(S):

```
 1. PHYHRS   = 171967
 2. DCPHRS   = 105578
 3. RNHRS    = 324351
 4. PARAHRS  = 1242238
 5. OPERBEDS = 201
 6. AD       = 38411
 7. DEP      = 53661
 8. OTHBEN   = 120150
 9. CENS     = 0
10. LARGE    = 1
11. MED      = 0
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

CALCULATED Y VALUE = 8382.7945554613
 1. PHYHRS   = 53737
 2. DCPHRS   = 53873
 3. RNHRS    = 104469
 4. PARAHRS  = 507231
 5. OPERBEDS = 53
 6. AD       = 9614
 7. DEP      = 10562
 8. OTHBEN   = 18539
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

CALCULATED Y VALUE = 2360.3511676287 FTLEE
                                    9442

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

```
 1. PHYHRS   = 53737
 2. DCPHRS   = 53873
 3. RNHRS    = 104469
 4. PARAHRS  = 507231
 5. OPERBEDS = 53
 6. AD       = 9614
 7. DEP      = 10562
 8. OTHBEN   = 18539
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

CALCULATED Y VALUE = 2360.3511676287
 1. PHYHRS   = 42275
 2. DCPHRS   = 56341
 3. RNHRS    = 110006
 4. PARAHRS  = 396092
 5. OPERBEDS = 61
 6. AD       = 9496
 7. DEP      = 8204
 8. OTHBEN   = 10646
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

CALCULATED Y VALUE = 2148.5647365568 MCCLN
                              8596

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 42275
  2. DCPHRS   = 56341
  3. RNHRS    = 110006
  4. PARAHRS  = 396092
  5. OPERBEDS = 61
  6. AD       = 9496
  7. DEP      = 8204
  8. OTHBEN   = 10646
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 2148.5647365568
  1. PHYHRS   = 64195
  2. DCPHRS   = 49859
  3. RNHRS    = 85835
  4. PARAHRS  = 364261
  5. OPERBEDS = 48
  6. AD       = 12362
  7. DEP      = 14679
  8. OTHBEN   = 14047
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 1
 12. SMALL    = 0
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 2508.9326332485 EUST I
                                  10,036
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

ОBSERVED Xi VALUE(S):

```
 1. PHYHRS   = 64195
 2. DCPHRS   = 49859
 3. RNHRS    = 85835
 4. PARAHRS  = 364261
 5. OPERBEDS = 48
 6. AD       = 12362
 7. DEP      = 14679
 8. OTHBEN   = 14047
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

CALCULATED Y VALUE = 2508.9326332485

```
 1. PHYHRS   = 88630
 2. DCPHRS   = 76198
 3. RNHRS    = 201190
 4. PARAHRS  = 833465
 5. OPERBEDS = 90
 6. AD       = 18569
 7. DEP      = 56256
 8. OTHBEN   = 11157
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

CALCULATED Y VALUE = 5574.1867065537 STWRT

22,296

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

OBSERVED Xi VALUE(S):

```
 1. PHYHRS   = 88630
 2. DCPHRS   = 76198
 3. RNHRS    = 201190
 4. PARAHRS  = 833465
 5. OPERBEDS = 90
 6. AD       = 18569
 7. DEP      = 56256
 8. OTHBEN   = 11157
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

CALCULATED Y VALUE = 5574.1867065537

```
 1. PHYHRS   = 82273
 2. DCPHRS   = 97067
 3. RNHRS    = 176199
 4. PARAHRS  = 666270
 5. OPERBEDS = 111
 6. AD       = 15461
 7. DEP      = 24518
 8. OTHBEN   = 7305
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

CALCULATED Y VALUE = 4172.3860133247 RILEY

16,692

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

```
OBSERVED Xi VALUE(S):

  1. PHYHRS    = 82273
  2. DCPHRS    = 97067
  3. RNHRS     = 176199
  4. PARAHRS   = 666270
  5. OPERBEDS  = 111
  6. AD        = 15461
  7. DEP       = 24518
  8. OTHBEN    = 7305
  9. CENS      = 0
 10. LARGE     = 0
 11. MED       = 1
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 4172.3860133247
  1. PHYHRS    = 51829
  2. DCPHRS    = 29147
  3. RNHRS     = 115691
  4. PARAHRS   = 291900
  5. OPERBEDS  = 56
  6. AD        = 6459
  7. DEP       = 5127
  8. OTHBEN    = 15180
  9. CENS      = 0
 10. LARGE     = 0
 11. MED       = 1
 12. SMALL     = 0
 13. QTR1      = .25
 14. QTR2      = .25
 15. QTR3      = .25
 16. QTR4      = .25

CALCULATED Y VALUE = 1867.0422167041 WSTPT
                                 7468

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

ɜSERVED Xi VALUE(S):

```
 1. PHYHRS   = 51829
 2. DCPHRS   = 29147
 3. RNHRS    = 115691
 4. PARAHRS  = 291900
 5. OPERBEDS = 56
 6. AD       = 6459
 7. DEP      = 5127
 8. OTHBEN   = 15180
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

ALCULATED Y VALUE = 1867.0422167041

```
 1. PHYHRS   = 75427
 2. DCPHRS   = 45299
 3. RNHRS    = 185212
 4. PARAHRS  = 705439
 5. OPERBEDS = 85
 6. AD       = 15049
 7. DEP      = 20700
 8. OTHBEN   = 41923
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

ALCULATED Y VALUE = 3526.0634046072 F POLK
14104

PTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

NTER: OPTION:

```
3SERVED Xi VALUE(S):

 1. PHYHRS   = 75427
 2. DCPHRS   = 45299
 3. RNHRS    = 185212
 4. PARAHRS  = 705439
 5. OPERBEDS = 85
 6. AD       = 15049
 7. DEP      = 20700
 8. OTHBEN   = 41923
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

ALCULATED Y VALUE = 3526.0634046072
 1. PHYHRS   = 121137
 2. DCPHRS   = 63242
 3. RNHRS    = 212411
 4. PARAHRS  = 597370
 5. OPERBEDS = 95
 6. AD       = 15834
 7. DEP      = 22612
 8. OTHBEN   = 46717
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

ALCULATED Y VALUE = 4185.9548607741 BELVO

                                 / L 740
PTIONS:   A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

NTER: OPTION:
```

```
BSERVED Xi VALUE(S):

 1. PHYHRS   = 111868
 2. DCPHRS   = 90289
 3. RNHRS    = 148862
 4. PARAHRS  = 575281
 5. OPERBEDS = 43
 6. AD       = 22865
 7. DEP      = 35643
 8. OTHBEN   = 64513
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 1
12. SMALL    = 0
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

ALCULATED Y VALUE = 4387.7771141659
 1. PHYHRS   = 111868
 2. DCPHRS   = 90289
 3. RNHRS    = 148862
 4. PARAHRS  = 575281
 5. OPERBEDS = 43
 6. AD       = 22865
 7. DEP      = 35643
 8. OTHBEN   = 64513
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

ALCULATED Y VALUE = 4069.8708465686 MEADE
                                16,276

PTIONS:  A. REPEAT OUTPUT
         B. ANOTHER COMPUTATION
         C. [Terminate]

NTER: OPTION:
```

```
BSERVED Xi VALUE(S):

 1. PHYHRS   = 111868
 2. DCPHRS   = 90289
 3. RNHRS    = 148862
 4. PARAHRS  = 575281
 5. OPERBEDS = 43
 6. AD       = 22865
 7. DEP      = 35643
 8. OTHBEN   = 64513
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

ALCULATED Y VALUE = 4069.8708465686
 1. PHYHRS   = 53837
 2. DCPHRS   = 31024
 3. RNHRS    = 55485
 4. PARAHRS  = 327649
 5. OPERBEDS = 31
 6. AD       = 7078
 7. DEP      = 17078
 8. OTHBEN   = 33077
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

ALCULATED Y VALUE = 2077.6181375935 DEVEN

                                   8311
PTIONS:  A. REPEAT OUTPUT
         B. ANOTHER COMPUTATION
         C. [Terminate]

NTER: OPTION:
```

```
)BSERVED Xi VALUE(S):

 1. PHYHRS   = 53837
 2. DCPHRS   = 31024
 3. RNHRS    = 55485
 4. PARAHRS  = 327649
 5. OPERBEDS = 31
 6. AD       = 7078
 7. DEP      = 17078
 8. OTHBEN   = 33077
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

:ALCULATED Y VALUE = 2077.6181375935
 1. PHYHRS   = 42760
 2. DCPHRS   = 29729
 3. RNHRS    = 103834
 4. PARAHRS  = 388946
 5. OPERBEDS = 55
 6. AD       = 7193
 7. DEP      = 10945
 8. OTHBEN   = 9689
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25

:ALCULATED Y VALUE = 1788.9197785174 HUACH
                                7156
)PTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

:NTER: OPTION:
```

BSERVED Xi VALUE(S):

```
 1. PHYHRS   = 42760
 2. DCPHRS   = 29729
 3. RNHRS    = 103834
 4. PARAHRS  = 388946
 5. OPERBEDS = 55
 6. AD       = 7193
 7. DEP      = 10945
 8. OTHBEN   = 9689
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

ALCULATED Y VALUE = 1788.9197785174

```
 1. PHYHRS   = 64906
 2. DCPHRS   = 55630
 3. RNHRS    = 117587
 4. PARAHRS  = 471969
 5. OPERBEDS = 42
 6. AD       = 8464
 7. DEP      = 12600
 8. OTHBEN   = 13292
 9. CENS     = 0
10. LARGE    = 0
11. MED      = 0
12. SMALL    = 1
13. QTR1     = .25
14. QTR2     = .25
15. QTR3     = .25
16. QTR4     = .25
```

ALCULATED Y VALUE = 2063.3588275154 RUCKR

8253

PTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

NTER: OPTION:

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 64906
  2. DCPHRS   = 55630
  3. RNHRS    = 117587
  4. PARAHRS  = 471969
  5. OPERBEDS = 42
  6. AD       = 8464
  7. DEP      = 12600
  8. OTHBEN   = 13292
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 2063.3588275154
  1. PHYHRS   = 47530
  2. DCPHRS   = 40919
  3. RNHRS    = 98437
  4. PARAHRS  = 549662
  5. OPERBEDS = 38
  6. AD       = 12910
  7. DEP      = 20492
  8. OTHBEN   = 5842
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 2194.6892019163 ALASK
                                8780
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 47530
  2. DCPHRS   = 40919
  3. RNHRS    = 98437
  4. PARAHRS  = 549662
  5. OPERBEDS = 38
  6. AD       = 12910
  7. DEP      = 20492
  8. OTHBEN   = 5842
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 2194.6892019163
  1. PHYHRS   = 38016
  2. DCPHRS   = 24152
  3. RNHRS    = 74853
  4. PARAHRS  = 223256
  5. OPERBEDS = 27
  6. AD       = 3649
  7. DEP      = 7044
  8. OTHBEN   = 16013
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1179.8982816295 REPST
                                 4720

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

```
  1. PHYHRS   = 38016
  2. DCPHRS   = 24152
  3. RNHRS    = 74853
  4. PARAHRS  = 223256
  5. OPERBEDS = 27
  6. AD       = 3649
  7. DEP      = 7044
  8. OTHBEN   = 16013
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25
```

CALCULATED Y VALUE = 1179.8982816295

```
  1. PHYHRS   = 45275
  2. DCPHRS   = 26154
  3. RNHRS    = 55807
  4. PARAHRS  = 211843
  5. OPERBEDS = 23
  6. AD       = 6222
  7. DEP      = 15321
  8. OTHBEN   = 45091
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25
```

CALCULATED Y VALUE = 1802.010717971 MON NJ

7208

```
OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]
```

ENTER: OPTION:

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 45275
  2. DCPHRS   = 26154
  3. RNHRS    = 55807
  4. PARAHRS  = 211843
  5. OPERBEDS = 23
  6. AD       = 6222
  7. DEP      = 15321
  8. OTHBEN   = 45091
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1802.010717971
  1. PHYHRS   = 45663
  2. DCPHRS   = 39184
  3. RNHRS    = 80893
  4. PARAHRS  = 317837
  5. OPERBEDS = 26
  6. AD       = 6506
  7. DEP      = 13274
  8. OTHBEN   = 17390
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1659.5879098811  LVN7H
                           6638

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

```
OBSERVED Xi VALUE(S):

  1. PHYHRS   = 45663
  2. DCPHRS   = 39184
  3. RNHRS    = 80893
  4. PARAHRS  = 317837
  5. OPERBEDS = 26
  6. AD       = 6506
  7. DEP      = 13274
  8. OTHBEN   = 17390
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 1659.5879098811
  1. PHYHRS   = 25704
  2. DCPHRS   = 26334
  3. RNHRS    = 25820
  4. PARAHRS  = 168978
  5. OPERBEDS = 5
  6. AD       = 4320
  7. DEP      = 6945
  8. OTHBEN   = 13782
  9. CENS     = 0
 10. LARGE    = 0
 11. MED      = 0
 12. SMALL    = 1
 13. QTR1     = .25
 14. QTR2     = .25
 15. QTR3     = .25
 16. QTR4     = .25

CALCULATED Y VALUE = 821.4580629732 BENHR
                                3288

OPTIONS:  A. REPEAT OUTPUT
          B. ANOTHER COMPUTATION
          C. [Terminate]

ENTER: OPTION:
```

OBSERVED Xi VALUE(S):

1. PHYHRS = 25704
2. DCPHRS = 26334
3. RNHRS = 25820
4. PARAHRS = 168978
5. OPERBEDS = 5
6. AD = 4320
7. DEP = 6945
8. OTHBEN = 13782
9. CENS = 0
10. LARGE = 0
11. MED = 0
12. SMALL = 1
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

CALCULATED Y VALUE = 821.4580629732

1. PHYHRS = 25571
2. DCPHRS = 17463
3. RNHRS = 49373
4. PARAHRS = 189736
5. OPERBEDS = 13
6. AD = 6984
7. DEP = 5370
8. OTHBEN = 822
9. CENS = 0
10. LARGE = 0
11. MED = 0
12. SMALL = 1
13. QTR1 = .25
14. QTR2 = .25
15. QTR3 = .25
16. QTR4 = .25

CALCULATED Y VALUE = 687.5676686586 IRWCA
2750

OPTIONS: A. REPEAT OUTPUT
B. ANOTHER COMPUTATION
C. [Terminate]

ENTER: OPTION:

APPENDIX O

Facility	AVERACE DAILY MCCUs FY89	PREDCTD DAILY MCCUs FY89	ACTUAL MINUS PREDCTD	PERCENT DELTA
WRAMC	2194.8	2268	-73.2	-3.33515
LETTR	981.1	1127	-145.9	-14.871
FITZS	1424.4	1357	67.4	4.731816
GORDN	1323.7	1443	-119.3	-9.01261
TRIPL	1964	2057	-93	-4.73523
MADGN	1916.4	1753	163.4	8.526403
WBAMC	1701.6	1538	163.6	9.61448
DIXNJ	553.1	680	-126.9	-22.9434
BENNG	1054.2	947	107.2	10.16884
GORGA	537.5	628	-90.5	-16.8372
JAKSN	712.2	598	114.2	16.03482
FTORD	813.3	824	-10.7	-1.31562
CAMPB	914.4	868	46.4	5.074365
KNOXX	842	913	-71	-8.4323
CARSN	841.6	786	55.6	6.606463
LWOOD	791.5	802	-10.5	-1.32659
BRAGG	1438.8	1403	35.8	2.488184
FSILL	777.5	796	-18.5	-2.37942
FHOOD	1390.4	1313	77.4	5.566743
FTLEE	366.1	375	-8.9	-2.43102
MCCLN	379.6	324	55.6	14.64699
EUSTI	374	390	-16	-4.27807
STWRT	574.3	675	-100.7	-17.5343
RILEY	696.5	633	63.5	9.117013
WSTPT	314.3	279	35.3	11.2313
FPOLK	574.5	579	-4.5	-0.78328
BELVO	639.8	627	12.8	2.000625
MEADE	626.8	606	20.8	3.318442
DEVEN	247.2	308	-60.8	-24.5954
HUACH	305.8	264	41.8	13.66906
RUCKR	344.3	295	49.3	14.3189
ALASK	302.6	383	-80.4	-26.5697
REDST	197.5	158	39.5	20
MONNJ	185	255	-70	-37.8378
LVNTH	266.7	247	19.7	7.386576
BENHR	132.4	109	23.4	17.67371
IRWCA	152.4	100	52.4	34.3832

Facility	FY89 MWUs	PREDCTD FY89 MWUs	ACTUAL MINUS PREDCTD	PERCENT DIFFERENCE
WRAMC	71366.9	72896	-1529.1	-2.14258
LETTR	27842.9	30558	-2715.1	-9.75149
FITZS	41498	40495	1003	2.416983
GORDN	36398.6	38521	-2122.4	-5.83099
TRIPL	50459.5	52787	-2327.5	-4.61261
MADGN	47567.1	45036	2531.1	5.321114
WBAMC	43528.7	40710	2818.7	6.475497
DIXNJ	15069.7	16404	-1334.3	-8.85419
BENNG	27629.6	24880	2749.6	9.951646
GORGA	13328.6	15828	-2499.4	-18.7521
JAKSN	18201	16408	1793	9.851107
FTORD	21222.8	21300	-77.2	-0.36375
CAMPB	23118	22256	862	3.728696
KNOXX	23110.2	24576	-1465.8	-6.34265
CARSN	20970.9	18846	2124.9	10.13261
LWOOD	19756.1	21524	-1767.9	-8.94862
BRAGG	36533.4	35836	697.4	1.908938
FSILL	18317.9	20124	-1806.1	-9.85975
FHOOD	33085.2	33532	-446.8	-1.35045
FTLEE	10111.5	9442	669.5	6.621173
MCCLN	9610.1	8596	1014.1	10.55243
EUSTI	10045.6	10036	9.6	0.095564
STWRT	13929.1	22296	-8366.9	-60.0677
RILEY	16910.2	16692	218.2	1.290345
WSTPT	8136.9	7468	668.9	8.220575
FPOLK	13998.5	14104	-105.5	-0.75365
BELVO	16097.6	16740	-642.4	-3.99065
MEADE	17723.2	16276	1447.2	8.165568
DEVEN	6970.5	8311	-1340.5	-19.231
HUACH	7672.7	7156	516.7	6.734265
RUCKR	9000.7	8253	747.7	8.307131
ALASK	7444.7	8780	-1335.3	-17.9362
REDST	5730.6	4720	1010.6	17.63515
MONNJ	5085.5	7208	-2122.5	-41.7363
LVNTH	6807.6	6638	169.6	2.491333
BENHR	3751.7	3288	463.7	12.35973
IRWCA	3807.7	2750	1057.7	27.77792

APPENDIX P

PERCENT OF DISPOSITIONS BY PATIENT CATEGORY
WORLDWIDE, CY 1989, SORT BY AD-MIL + DEPN

US ARMY HOSPITALS	AD-MIL	DEPN-AD	OTHER	TOTAL	AD-MIL%	AD-MIL+ DEPN %
OTHER	57	0	217	274	20.8	20.8
LETTERMAN AMC, CA	1652	3478	3637	8767	18.8	58.5
SHAPE, BELGIUM	314	481	391	1186	26.5	67.0
WALTER REED AMC,DC	5559	11140	8086	24785	22.4	67.4
BROOKE AMC, TX	3976	9228	6316	19520	20.4	67.6
FT LEAVENWORTH, KS	470	943	638	2051	22.9	68.9
FITZSIMONS AMC, CO	3384	7938	4444	15766	21.5	71.8
REDSTONE ARSENAL, AL	569	1044	501	2114	26.9	76.3
EISENHOWER AMC, GA	4064	5909	2928	12901	31.5	77.3
FT MONMOUTH, NJ	627	383	278	1288	48.7	78.4
MADIGAN AMC, WA	4898	13583	4739	23220	21.1	79.6
GORGAS AH, PANAMA	2797	2849	1447	7093	39.4	79.6
WM BEAUMONT AMC, TX	5175	12245	4102	21522	24.0	80.9
FT MEADE, MD	1727	2152	841	4720	36.6	82.2
FT MCCLELLAN, AL	2187	1945	847	4979	43.9	83.0
FT BELVOIR, VA	1663	4863	1214	7740	21.5	84.3
FT EUSTIS, VA	1201	1600	493	3294	36.5	85.0
TRIPLER AMC, HI	6867	14476	3713	25056	27.4	85.2
FT DEVENS, MA	1276	826	348	2450	52.1	85.8
FT RUCKER, AL	782	2801	577	4160	18.8	86.1
FT BENNING, GA	4509	5971	1565	12045	37.4	87.0
FT LEE, VA	3105	1124	626	4855	64.0	87.1
FT ORD, CA	3060	6672	1428	11160	27.4	87.2
FT HUACHUCA, AZ	1027	2098	450	3575	28.7	87.4
FT JACKSON, SC	5927	2138	1130	9195	64.5	87.7
FT BRAGG, NC	6380	9261	2089	17730	36.0	88.2
FT LEONARD WOOD, MO	5455	3457	1109	10021	54.4	88.9
WEST POINT, NY	2786	1209	499	4494	62.0	88.9
FT SILL, OK	3532	4485	989	9006	39.2	89.0
FT CARSON, CO	3199	5997	1108	10304	31.0	89.2
FT BEN HARRISON, IN	759	334	131	1224	62.0	89.3
SEOUL, KOREA	3470	2622	654	6746	51.4	90.3
FT DIX, NJ	3990	939	515	5444	73.3	90.5
FT CAMPBELL, KY	2841	4259	732	7832	36.3	90.7
LANDSTUHL, GE	4439	5758	1047	11244	39.5	90.7
FT RILEY, KS	2449	4524	624	7597	32.2	91.8
FT KNOX, KY	4309	4229	714	9252	46.6	92.3
FT HOOD, TX	5292	12055	1393	18740	28.2	92.6
FT POLK, LA	2170	4509	499	7178	30.2	93.0
HEIDELBERG, GE	1899	2618	309	4826	39.3	93.6
VICENZA, IT	335	685	62	1082	31.0	94.3
AUGSBURG, GE	525	666	72	1263	41.6	94.3
FT STEWART, GA	1945	4383	349	6677	29.1	94.8
BERLIN, GE	886	1435	123	2444	36.3	95.0
FRANKFURT, GE	3262	4354	374	7990	40.8	95.3
BAD CANNSTATT, GE	1623	1877	156	3656	44.4	95.7
FT IRWIN, CA	877	960	62	1899	46.2	96.7
NUERNBERG, GE	3796	4087	272	8155	46.5	96.7
FT WAINWRIGHT, AK	1113	2291	111	3515	31.7	96.8
BREMERHAVEN, GE	290	395	17	702	41.3	97.6
WUERZBURG, GE	2277	2772	93	5142	44.3	98.2
FT DRUM, NY	20	0	0	20	100.0	100.0
TOTAL	136792	206048	65059	407899	33.5	84.1